

Airfield Pavement Evaluation, Lawson Army Airfield, Fort Benning, Georgia

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February 2002



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Final report

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Engineering and Services Branch Fort Benning, Georgia 31905

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Preface

The purpose of this report is to provide an assessment of load-carrying capacity and condition of airfield pavements at Lawson Army Airfield (LAAF), Fort Benning, Georgia. This report provides data for the following:

- a. Planning and programming pavement maintenance, repairs, and structural improvements.
- b. Designing maintenance, repair, and construction projects.
- c. Determining airfield operational capabilities.
- d. Providing information for aviation flight publications and mission planning.

Users of information from this report include the installation's Directorate of Installation Support (DIS), engineering design agencies (DIS's, U.S. Army Corps of Engineers), Airfield Commanders, U.S. Army Aeronautical Services Agency, and agencies assigned operations planning responsibilities. Information concerning aircraft inventory, passes, and operations shall not be released outside U.S. Government agencies. This report satisfies requirements for condition inspection and structural evaluation established in Army Regulation AR 420-72 (Headquarters, Department of the Army 2000) and supports airfield survey requirements identified in Army Regulation AR 95-2 (Headquarters, Department of the Army 1990).

The Army Airfield Pavement Evaluation Program is sponsored and technically monitored by the U.S. Army Corps of Engineers, Transportation Systems Center (CENWO-ED-TX), located in Omaha, NE. The U.S. Army Infantry Center, Engineering and Services Branch, Fort Benning, Georgia, provided funding for this investigation.

Personnel of the U.S. Army Engineer Research and Development Center (ERDC), Geotechnical and Structures Laboratory (GSL), Vicksburg, MS, prepared this publication. The findings and recommendations presented in this report are based upon pavement structural testing, data analysis, and condition survey work at LAAF. The required field testing was conducted in July 2001. The evaluation team consisted of Messrs. Robert W. Grau, James A. Harrison, Dan D. Mathews, and Patrick S. McCaffrey, Jr., Airfield and Pavements Branch

(APB), GSL. Messrs. Grau and McCaffrey prepared this publication under the supervision of Mr. Don R. Alexander, Chief, APB, Dr. Albert J. Bush III, Chief, Engineering Systems and Materials Division, and Dr. Michael J. O'Connor, Director, GSL.

At the time of publication of this report, Dr. James R. Houston was Director of ERDC, and COL John W. Morris III, EN, was Commander and Executive Director.

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Executive Summary

Personnel of the U.S. Army Engineer Research and Development Center (ERDC), Vicksburg, MS, conducted the field testing at Lawson (LAAF), Fort Benning, Georgia, during July 2001. The structural capacity and physical properties of the pavement facilities were determined from nondestructive tests using a heavy weight deflectometer (HWD) and from measurements taken in previous studies. A visual inspection was also conducted to establish the condition of the airfield surface, which does not necessarily correspond to its load-carrying capacity.

The results of the tests and visual inspection reveal the following:

- a. The primary airfield pavement facilities and their assigned Pavement Classification Number (PCN) are shown in Illustration 1.
- b. The primary runway (15-33) and five (T1A, T3A, T5A, T7A, and T8A) of the seven primary taxiway features are structurally adequate to withstand day-to-day mission (i.e., peacetime use) for 20 years. All fixed-wing parking aprons with the exception of Apron 1 and the North Holding Apron are structurally inadequate to withstand the projected day-to-day mission traffic.
- c. Installation Status Report (ISR) ratings for the airfield are shown in Illustration 2.
- d. Approximately \$1,250,000 (FY02) for repair is required to improve the surfaces of 9 runway features, 18 taxiway features, and 12 apron features to meet the minimum PCI requirements.
- e. In planning structural improvements and/or reconstruction requirements, it should be recognized that UFC 3-260-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) specifies that the following pavements be rigid pavement: all paved areas on which aircraft or helicopters are regularly parked, maintained, serviced, or preflight checked, on hangar floors and access aprons; on runway ends (305 m (1,000 ft) of a Class B runway; primary taxiways for Class B runways; hazardous cargo, power check, compass calibration, warmup, alert, arm/disarm, holding, and washrack pads; and any other area where it can be

documented that a flexible pavement will be damaged by jet blast or by spillage of fuel or hydraulic fluid.

f. Overloading the pavement facilities may shorten the life expectancy.

Additional details on structural capacity, surface condition, and work required to maintain and strengthen the airfield are contained in Chapters 2 and 3 of this report.

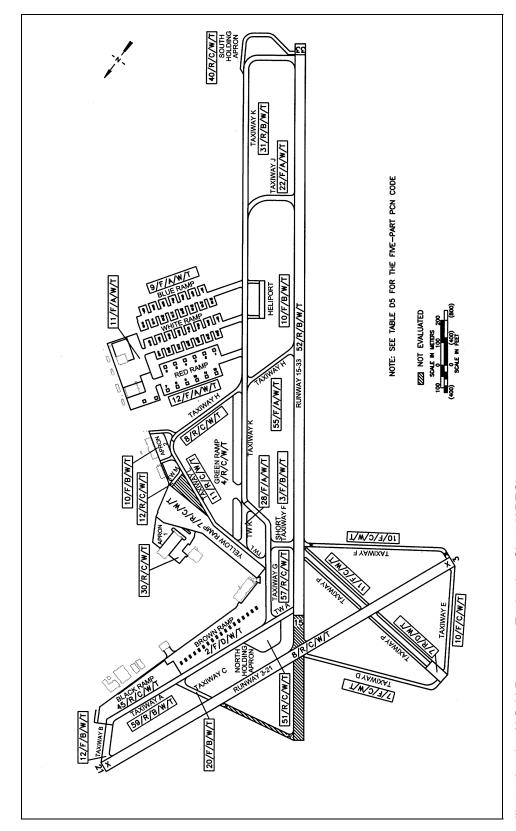


Illustration 1. Airfield Pavement Evaluation Chart (APEC)

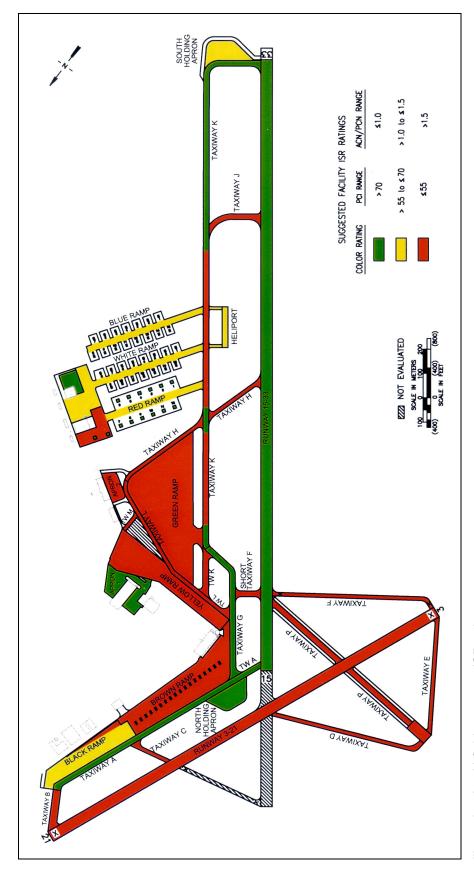


Illustration 2. Airfield pavement ISR ratings

1 Introduction

Background

In May 1982 the Department of the Army initiated a program to determine and evaluate the physical properties, the load-carrying capacity for various aircraft, and the general condition of the pavements at major U.S. Army Airfields (AAFs). This program was established at the request of the Major Army Commands (FORSCOM, TRADOC, and AMC). Headquarters, U.S. Army Corps of Engineers (CECW-EW) sponsors a program for periodic evaluation of Army Airfield facilities in accordance with Army Regulation AR 420-72 (Headquarters, Department of the Army 2000). All Category 1 AAFs and instrumented U.S. Army Heliports (AHPs) are included in the CECW-EW program. The evaluation of the airfield pavements was performed to determine the structural adequacy of the existing pavements to accommodate mission aircraft. Results of this evaluation were also used to identify maintenance, repair, and major repair work requirements and to help establish Installation Status Report (ISR) ratings. The U.S. Army Infantry Center, Engineering and Services Branch, Fort Benning, GA provided funding for this investigation. Results of this investigation will provide current information for designing upgrades to the pavement facilities.

Objective and Scope

The primary objectives of this investigation were to determine the allowable aircraft loads and design traffic, and to identify maintenance, repair, and structural improvement needs for each airfield pavement feature. These objectives were accomplished by:

- a. Obtaining records of day-to-day traffic operations from the installation Airfield Commander.
- b. Conducting a structural evaluation of the airfield pavements in accordance with UFC 3-260-03 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) using the nondestructive testing device.

Chapter 1 Introduction 1

c. Performing a condition survey to determine pavement distresses (type, severity and magnitude) in accordance with ASTM D 5340-93 and using analysis features of the Micro Paver pavement management system.

The results of this study can be used to:

- a. Provide preliminary engineering data for pavement design (Appendixes A and B).
- b. Assist in identifying and forecasting maintenance and repair work, the preparation of long range work plans, and programming funds for the various work classification categories (Appendixes C and E).
- c. Determine type and gross weights of aircraft that can operate on a given airfield feature without causing structural damage or shortening the life of the pavement structure (Appendix D).
- d. Determine aircraft operational constraints as a function of pavement strength and surface condition (Appendix D).
- e. Determine the need for structural improvements to sustain current levels of aircraft operations (Appendix D).
- f. Summarize results for ISR ratings (Executive Summary).

Chapter 2 of this report includes the results of the aircraft classification number-pavement classification number (ACN-PCN) analysis for use by U.S. Army Aeronautical Services Agency (USAASA), the airfield commander, and Deputy Chief of Staff for Operations and Plans (DCSOPS) personnel. Chapter 3 contains maintenance, repair, and structural improvement recommendations for use by DPW personnel and design agencies. Chapter 4 contains conclusions and recommendations in summary form. Detailed supporting data are provided in the appendices.

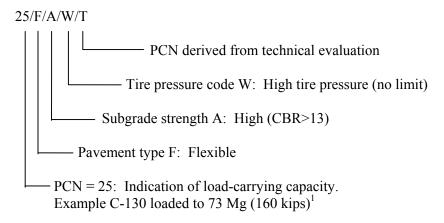
2 Chapter 1 Introduction

2 Pavement Load-Carrying Capacity

General

The load-carrying capacity is a function of the strength of the pavement, the gross weight of the aircraft, and the number of applications of the load. The method used to report pavement load-carrying capacity is the ACN-PCN system as adopted by the International Civil Aviation Organization (ICAO). The United States, as a participating member of ICAO, is required to report pavement strength in this format. The ACN-PCN format also provides the airfield evaluation information required by Army Regulation AR 95-2 (Headquarters, Department of the Army 1990).

The ACN and PCN are defined as follows: The ACN is a number which expresses the relative structural effect of an aircraft on both flexible and rigid pavements for specific standard subgrade strengths in terms of a standard single wheel load. The PCN is a number which expresses the relative load-carrying capacity of a pavement for a given pavement life in terms of a standard single wheel load. An example of a PCN five part code is as follows:



The system works by comparing the ACN to the PCN. The PCN is a representation of the allowable load for a specified number of repetitions over the life

3

¹ Most of the dimensions and measurements reported were obtained in non-SI units. All such values have been converted using the conversion factors given in ASTM E 380.

of a pavement. The ACN is a representation of the load applied by an aircraft using the pavement. The system is structured such that an aircraft operating at an ACN (applied load) equal to or less than the PCN (allowable load) would comply with load restrictions established based on a specified design life for the pavement facility. If, however, the ACN (applied load) is greater than the PCN (allowable load), the specified design life will be shortened due to this overloading. Pavements can usually support some overload; however, pavement life is reduced. As a general rule, ACN/PCN ratios of up to 1.25 have minimal impact on pavement life. If the ACN/PCN ratio is between 1.25 and 1.50, aircraft operations should be limited to 10 passes, and the pavement inspected after each operation. Aircraft operations resulting in an ACN/PCN ratio over 1.50 should not be allowed except for emergencies.

Load-Carrying Capacity

The first step in determining the load-carrying capacity of the pavements at Lawson (LAAF), Fort Benning, Georgia was to estimate the traffic to which the airfield will be subjected over the next 20 years. The traffic mix established for this primary airfield facilities (Runway 15-33, Taxiways A, G, and K (T1A-T5A), Taxiways Short F, T17C of H, J, T6B of K, and T24B of L, the Black Ramp, and the South and North Holding Aprons, is shown in Table A4. Based on this mix, the critical aircraft operating on the airfield was determined to be the C-17 aircraft at a design pass level of 6,600 for AC pavements and 61,000 for rigid pavements, as shown in Table D1. Runway 03-21, Taxiways B, C, D, E, F, and the Brown Ramp were evaluated for 50,000 passes of the C-130 aircraft. The Yellow Ramp, Green Ramp, Apron 1, Apron 2, Taxiways H, L, and M were evaluated for 50,000 passes of the C-37 aircraft. All rotary-wing facilities were evaluated for 50,000 passes of a CH-47. Using this traffic information, and results of the data analysis, the ACN value for the critical aircraft operating on the LAAF pavements was determined. The operational ACN for the airfield is 49/R/B/W/T for the rigid pavements and 50/F/A/W/T for the flexible pavements. See Table D5 for description of the five component ACN or PCN code. The numerical ACN values calculated for the critical aircraft operating on AC pavements on each of the four subgrade categories are presented in Table D2.

The critical PCN value for each airfield facility is presented in the Airfield Pavement Evaluation Chart (APEC) in Illustration 1. A summary of allowable loads and overlay requirements determined for the critical aircraft and its design pass level is shown in Table D3. PCN codes for the controlling feature of each facility during the thaw-weakening period are presented in Table D4.

The number of passes of mobilization and contingency aircraft loadings that could be sustained by each facility is dependent on the ACN of the aircraft and the critical PCN of the facility. During wartime, many aircraft are allowed to carry heavier loads than during peacetime. This allowance means that the aircraft would have a higher ACN because of the higher loading and would cause more damage per pass than in peacetime. Also, under some contingency plans or during emergencies, heavier aircraft than those in the traffic table, see Table A4,

could be considered for using the airfield pavements. These heavier aircraft would generally have higher ACN values and cause more damage than those normally using the airfield. The operational life of the pavement will be reduced if it is subjected to aircraft loadings having ACN values higher than the PCN of the facility. An example of a procedure to determine the impact of mobilization and contingency aircraft operations is presented in Appendix D.

3 Recommendations for Maintenance, Repair, and Structural Improvements

General

Recommendations for maintenance, repair, and structural improvements are based on results from both the structural evaluation (Appendix D) and the pavement condition survey (Appendix C). Either or both the evaluation and/or the survey may indicate that a particular feature needs repair and/or improvement. If the pavement condition index (PCI) is below the required value contained in Army Regulation AR 420-72 (Headquarters, Department of the Army 2000), the pavement needs maintenance to improve its surface condition. If the ACN/ PCN ratio determined for the critical aircraft is greater than one, the pavement needs structural improvement. Where both evaluations indicate improvements are needed, the recommendations are made such that the repairs to the surface are those needed until the structural improvements can be made. If the structural improvements are made first, the surface repairs may not be necessary. The PCI, ACN/PCN, ISR rating, and recommended general maintenance alternatives for each feature are shown in Table 3-1, the Airfield Pavement Evaluation General Summary. Specific recommendations for maintenance are identified in Table 3-2.

The ISR is an information system designed to help the Army monitor some of the basic elements that affect the quality of life on installations. The ISR also supports decision-making by giving managers an objective means and a common methodology for comparing conditions across installations and across functional areas.

Recommendations for structural improvements have been defined in terms of overlays in this report. In some instances, overlays may not be the most cost effective or best engineering alternative for pavement strengthening. It should be noted that the overlay requirements shown in Table 3-2 were determined based on representative conditions at the time of testing and should be considered minimum values until verified by further investigation. These overlays should be used as a guide when programming funds for design projects. Prior to advertising an improvement project, a thorough pavement analysis and design

should be completed to select the most cost-effective improvement technique. All designs should be reviewed by the U.S. Army Corps of Engineers Transportation Systems Center to ensure that they are in accordance with current design criteria.

Recommended overlay thicknesses follow the criteria for minimum thicknesses contained in UFC 3-260-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001). Where calculated thicknesses are greater than the required minimum thickness, the values were rounded up to the next higher 13 mm (1/2-in.).

Maintenance and repair (M&R) recommendations are based on the changes needed to provide the minimum required PCI. AR 420-72 (Headquarters, Department of the Army 2000) states that installation airfield pavements shall be maintained to at least the following PCI:

All runways > 70 Primary taxiways ≥ 60 Aprons and secondary taxiways > 55

Recommendations

Steps 1 through 5 of the flow chart shown in Figure 3-1 were used in determining the recommendations suggested in Table 3-2. The M&R alternatives suggested for the existing surfaces were selected from those listed for various distresses in flexible pavements shown in Table 3-3. In many instances, the performance of a specific alternative depends upon the geographical location and expertise of local contractors. Therefore, it is suggested that the local DIS personnel review all recommendations. Local costs for the approved alternatives can then be used with the Micro Paver program to obtain a reasonable cost estimate. All overlay, repair, or major repair should be in accordance with UFC 3-269-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) that specifies that the following pavements be rigid pavement: all paved areas on which aircraft or helicopters are regularly parked, maintained, serviced, or preflight checked, on hangar floors and access aprons; on runway ends (305 m (1,000 ft)) of a Class B runway; primary taxiways for Class B runways; hazardous cargo, power check, compass calibration, warmup, alert, arm/disarm, holding, and washrack pads; and any other area where it can be documented that a flexible pavement will be damaged by jet blast or by spillage of fuel or hydraulic fluid.

The PCI was developed to determine maintenance and repair needs. If the PCI is low, maintenance or repair is needed to increase the PCI. If the PCI is low and the PCN is greater than the ACN, localized maintenance or repair will generally be an acceptable solution. Although these maintenance activities and repairs will improve the PCI to acceptable levels, they may not be the most cost-effective alternative. An overlay or other overall improvement may be more cost-effective than considerable localized maintenance or repairs. Certainly, if

the current PCI is less than 25, overall improvements should be investigated. When an overlay is recommended, the maintenance recommended is that which is needed to keep the pavement serviceable and safe and its PCI at the required minimum until the overlay is applied. The PCN is used to specify the structural capability of an airfield pavement. If the design aircraft's ACN is larger than the computed PCN, the pavement is structurally inadequate to support the mission traffic. If only repairs to improve the PCI are applied, the pavement could deteriorate quite rapidly. Structural improvements are required to increase the load-carrying capacity so that the PCN is greater than or equal to the ACN (aircraft load). Even if the PCI is high, structural improvements are necessary to support the mission traffic if the PCN is less than the design ACN.

The PCIs of nine runway features (R14A - R22B), eighteen taxiway features (T6A and T9A – T25B), and twelve apron features (A3B, A4B, A6B, A7B, A10B, A12B, A15B – A18B, A21B, and A30B) fail to meet the minimum acceptable level outlined above. All features require crack and surface sealing to meet the minimum PCI requirement for runways, taxiways, and/or aprons. In addition to the required sealing, full-depth patching of alligator cracked, rutted, or depressed areas is recommended features R21A, T10C, A3B, A4B, A10B, and A15B. Based on the surface condition and high ACN/PCN ratio, complete replacement is recommended for T11A, T13A, T14C, T15C, T16C, T24B, A3B, A4B, and A18B. The estimated cost to upgrade the remaining thirty-four features is approximately \$1,250,000 FY02 dollars. An airfield pavements cost estimating guide for various maintenance and repair alternatives is shown in Table 3-4.

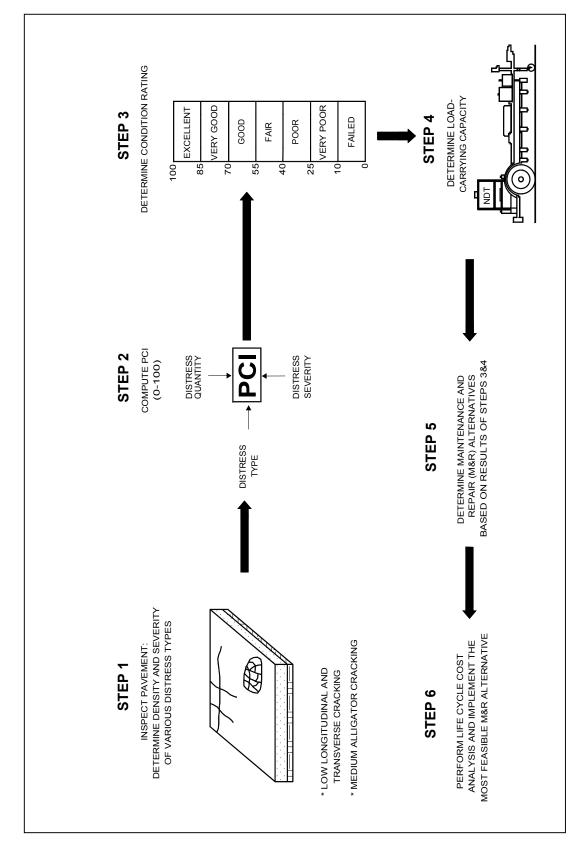


Figure 3-1. Flowchart for determination of maintenance and repair recommendations

Table 3-				l O-			
Airtieia	Paven	nent Ev	valuation Go │	enerai St	ummary Work Classif	ication ¹	
Pavement Feature	PCI	ACN/ PCN ²	ISR Rating ³	Do Nothing	Maintenance	Repair	Major Repair
R1A	97	0.82	Green	Х			
R2A	94	NA ⁴	Green	Х			
R3C	80	0.42	Green		Х		
R4C	82	NA ⁴	Green		Х		
R5C	85	0.42	Green		Х		
R6C	75	0.42	Green		Х		
R7C	82	NA ⁴	Green		Х		
R8C	77	0.56	Green		Х		
R9C	83	NA ⁴	Green		X		
R10A	80	0.94	Green		Х		
R11A	79	0.83	Green		X		
R12A	86	NA ⁴	Green	Х			
R13A	88	NA ⁴	Green	Х			
R14A	29	4.00	Red			х	
R15A	43	0.27	Red			х	
R16C	44	0.45	Red			Х	
R17C	40	1.40	Red			Х	
R18C	43	NA ⁴	Red			Х	
R19C	42	0.80	Red			Х	
R20A	42	2.15	Red			х	
R21A	31	4.00	Red			Х	
R22B	64	0.90	Amber		Х		
T1A	79	0.98	Green		Х		
T2A	71	1.53	Red			х	
ТЗА	72	0.83	Green		х		

(Sheet 1 of 3)

¹ Work is categorized for preliminary planning purposes only. Classification of work for administrative approval is an installation responsibility. Policy guidance for airfield pavements is provided in AR 420-72. In general, if the pavement real property facility is in a failed or failing condition, structural improvements to accommodate normal growth and evolution of missions and equipment are properly classified as repair work. The following types of work are properly classified as major repair: strengthening of a pavement to accommodate a new mission, extension or widening of the pavement, or complete replacement of the real property facility. Maintenance tasks for AC pavements include: crack sealing, partial and full depth patches, and surface seals. PCC pavement maintenance tasks include: crack and joint sealing and partial and full depth patches.

² Determined for design aircraft.

³ Based on the PCI and ACN/PCN ratio of the pavement feature.

⁴ Features were not evaluated for load because the outside edges do not receive aircraft traffic.

Table 3-1	l (Con	tinued)				
					Work Classif	ication ¹	
Pavement Feature	PCI	ACN/ PCN ²	ISR Rating ³	Do Nothing	Maintenance	Repair	Major Repair
T4A	82	1.58	Red			Х	
T5A	86	0.83	Green		Х		
T6A	41	1.79	Red			х	
T7A	83	0.86	Green		Х		
T8A	75	0.83	Green		Х		
T9A	39	2.33	Red			Х	
T10C	30	1.40	Red			Х	
T11A	33	4.28	Red			х	
T12A	47	3.00	Red			Х	
T13A	7	3.00	Red				Х
T14C	44	4.85	Red			Х	
T15C	26	2.72	Red			х	
T16C	34	19.00	Red			Х	
T17C	46	0.91	Red			х	
T18B	55	1.63	Red			х	
T19B	47	3.75	Red			х	
T20B	49	2.59	Red			х	
T21B	44	1.30	Red			х	
T22B	46	2.31	Red			х	
T23B	27	2.00	Red			х	
T24B	36	4.45	Red			х	
T25B	40	2.50	Red			х	
T26B	64	1.00	Amber		Х		
A1B	72	1.09	Amber		Х		
A2B	84	2.45	Red			х	
A3B	43	18.00	Red			х	

(Sheet 2 of 3)

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Determined for design aircraft.

Based on the PCI and ACN/PCN ratio of the pavement feature.

Table 3-1	(Con	cluded	l)				
					Work Classif	ication ¹	
Pavement Feature	PCI	ACN/ PCN ²	ISR Rating ³	Do Nothing	Maintenance	Repair	Major Repair
A4B	37	5.33	Red			Х	
A5B	82	3.55	Red			Х	
A6B	47	2.00	Red			Х	
A7B	41	1.89	Red			Х	
A8B	61	4.29	Red			Х	
A9B	57	1.76	Red			Х	
A10B	46	4.29	Red			Х	
A11B	60	1.76	Red			Х	
A12B	55	1.76	Red			Х	
A14B	85	1.00	Green		x		
A15B	36	5.60	Red			Х	
A16B	21	4.67	Red				Х
A17B	55	5.40	Red			Х	
A18B	33	7.50	Red			Х	
A19B	64	0.41	Amber		X		
A20B	88	0.56	Green	Х			
A21B	54	0.58	Red		x		
A22B	64	0.41	Amber		X		
A23B	90	0.56	Green	Х			
A24B	57	0.64	Amber		Х		
A25B	91	0.67	Green	Х			
A26B	64	0.78	Amber		Х		
A27B	77	0.67	Green		Х		
A28B	80	1.23	Amber			Х	
A29B	92	0.96	Green	Х			
A30B	47	2.70	Red			Х	

(Sheet 3 of 3)

¹ Work is categorized for preliminary planning purposes only. Classification of work for administrative approval is an installation responsibility. Policy guidance for airfield pavements is provided in AR 420-72. In general, if the pavement real property facility is in a failed or failing condition, structural improvements to accommodate normal growth and evolution of missions and equipment are properly classified as repair work. The following types of work are properly classified as major repair: strengthening of a pavement to accommodate a new mission, extension or widening of the pavement, or complete replacement of the real property facility. Maintenance tasks for AC pavements include: crack sealing, partial and full depth patches, and surface seals. PCC pavement maintenance tasks include: crack and joint sealing and partial and full depth patches.

Determined for design aircraft.

Based on the PCI and ACN/PCN ratio of the pavement feature.

Table 3-2 Summary	Table 3-2 Summary of Overlay and Maintenan	ay and N	Maintena	nce Requ	ce Requirements for the Day-to-Day Traffic Operations
		Overlay	Overlay Requirements, mm	nts, mm	
		•	(in.)		
Feature	Area Sq m (sq yd)	δC	PCC Partial Bond	PCC with	Maintenance and Repair Alternatives for Existing Surfaces
			5		Runway 15-33
R1A ²	4645	0	0 () ()	0	None
R2A ^{2, 3}	9290	(2)	(6:5)	(2:2)	Same as for R1A.
R3C	12 151 (14,533)	0.0)	NA ⁴	See ⁴	The PCI of this feature is above that required for runways. However, it is recommended that all medium-severity cracks be cleaned and then sealed with a high quality crack sealant.
R4C³	24 303 (29,067)	1	1	1	Same as for R3C
R5C	4181 (5,000)	0 (0.0)	NA ⁴	See ⁴	Same as for R3C
R6C	10 497 (12,555)	0.0)	NA ⁴	See ⁴	Same as for R3C
R7C³	20 995 (25,111)	. !	1	1	Same as for R3C
R8C ²	4757 (5,689)	0 (0.0)	NA ⁴	See ⁴	Same as for R3C
R9C ^{2, 3}	9513 (11,378)	. 1	1	-	Same as for R3C
R10A ²	3484 (4,167)	0.0)	0(0:0)	0 (0.0)	The PCI of this feature is above that required for runways. However, it is recommended that the joint sealant be replaced with a high-quality sealer ⁵ within 2 years.
R11A ²	4413 (5,278)	0 (0.0)	0(0.0)	0(0.0)	Same as for R10A plus all medium- and high-severity spalls should be repaired with an epoxy concrete patch or full-depth patching.
R12A ^{2, 3}	3484 (4,167)	. 1	-	-	None
R13A ^{2, 3}	2555 (3,056)	ı	-	1	None
					Runway 03-21
R14A ²	4181 (5,000)	686 (27.0)	NA	381 (15.0)	Clean all cracks, remove all loose material, and seal the entire area with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). Structural improvements are required. PCC reconstruction should be considered if this feature is to withstand the projected traffic.
					(Sheet 1 of 8)

For planning purposes only.

UFC 3-260-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) requires that the surface be concrete.

See TM 5-882-11/AFP 88-6, Chapter 7 (Headquarters, Departments of the Army and Air Force 1993) for guidance.

Table 3-	Table 3-2 (Continued)	(pər			
		Overla	Overlay Requiremen (in.) ¹	ents, mm	
Feature	Area Sq m (sq yd)	AC	PCC Partial Bond	PCC with no Bond	Maintenance and Repair Alternatives for Existing Surfaces
					Runway 03-21
R15A ²	9755 (11,667)	0 (0:0)	NA ⁴	See ⁴	Clean all cracks, remove all loose material, and seal the entire area with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance).
R16C	11 148 (13,333)	0.0)	NA ⁴	See ⁴	Same as for R15A.
R17C	13 471 (16,111)	51 (2.0)	NA ⁴	See ⁴	Same as for R15A.
R18C³	26 941 (32,222)	, !	1	1	Same as for R15A.
R19C	2787 (3,333)	0 (0:0)	NA ⁴	See ⁴	Same as for R15A.
R20A ²	9755 (11,667)	127 (5.0)	NA ⁴	See ⁴	Same as for R15A. Structural improvements are required to withstand the projected traffic. Reconstruction with PCC should be considered.
R21A ²	4181 (5,000)	673 (26.5)	ı	368 (14.5)	Clean all cracks, remove all loose material, full-depth patch all alligator and rutted areas, and seal the entire area with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). Reconstruction with PCC should be considered.
					Rotary-Wing Runway
R22B	3832 (4,583)	(0.0)	AA A	See ⁴	Clean all cracks, remove all loose material, and seal the entire area with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). Taxiway K
T1A ²	21 989 (26,300)	(0.0)	0.0)	0.0)	The PCI of this feature is above that required for taxiways. However, it is recommended that the joints and the medium- and high-severity cracks be cleaned and sealed with a high-quality sealer ⁵ and that the high- and medium-severity spalls be repaired with an epoxy concrete patch or a full-depth patch.
T2A ²	14 632 (17,500)	0 (8.5)	0 (10.0)	0 (12.5)	Same as for T1A. Structural improvements are required and due to the indicated required overlay thicknesses, remove/replace with PCC is recommended.
T3A ²	2439 (2,917)	0 (0.0)	0 (0:0)	00:0)	Same as for T1A.
T4A ²	8535 (10,208)	(9.5)	0 (9.5)	0 (13.0)	Same as for T2A.
T5A ²	2439 (2,917)	(0.0)	(0.0)	(0.0)	The PCI of this feature is above that required for taxiways. However, it is recommended that the joints be cleaned and sealed with a high-quality sealer ⁵ .
					(Sheet 2 of 8)

1 For planning purposes only.

² UFC 3-260-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) requires that the surface be concrete.

³ Edges were not evaluated for load-carrying capacity.

⁴ Was not calculated because feature was evaluated as a flexible pavement.

⁵ See TM 5-882-11/AFP 88-6, Chapter 7 (Headquarters, Departments of the Army and Air Force 1993) for guidance.

Table 3-	Table 3-2 (Continued)	(per			
		Overlay	Overlay Requirements, mm	ents, mm	
			(in.)		
L	Area Sq m		PCC Partial	PCC with	
Feature	(sd yd)	AC	Bond	no Bond	Maintenance and Repair Alternatives for Existing Surfaces
					Taxiway K (concluded)
T6A ²	4181	0	NA⁴	See ⁴	Increase the PCI to an acceptable level by cleaning and sealing the medium-severity cracks. A high-quality
	(2,000)	(2.0)			sealer ² is recommended. If this feature is to withstand the project design traffic, reconstruction with PCC is
					Taxiwav G
T7A ²	13 169	0	0	0	The PCI of this feature is above that required for taxiways. However, it is recommended that the joints be
	(15,750)	(0.0)	(0.0)	(0.0)	cleaned and sealed with a high-quality sealer ⁵ .
			-		Taxiway A
T8A ²	22 296	0	0	0	Same as for T7A. Also, the failed pavement area at the juncture of taxiways A and G should be repaired by
S	(26,667)	(0.0)	(0:0)	(0.0)	correcting the subsurface drainage system and then replacing the shattered PCC slabs.
					Taxiway B
T9A ²	3693	178	NA ⁴	Spo4	Increase the PCI to an acceptable level by cleaning entire surface and then sealing the medium- and high-
5	(4.417)	(2.0)	<u> </u>	}	severity cracks with a high-cuality crack sealant. Because of the weathering/rayeling it is suggested that the
					entire surface be sealed with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET
					web site for product guidance). Structural improvements are required. PCC reconstruction is recommended if
					this feature is considered a primary taxiway to a Class B runway.
					Taxiway C
T10C	2439	88	NA ⁴	See ⁴	Increase the PCI to an acceptable level by full-depth patching all alligator cracked areas and also by cleaning
	(2,917)	(3.5)			entire surface and then seal the medium- and high-severity cracks with a high quality crack sealant? Structural
					improvements are required to withstand the projected traffic.
					Taxiway D
T11A ²	9522	229	NA ⁴	See ⁴	Same as for 19A.
	(222622)	(2.2)			Taxiwav E
T128 ²	7200	165	NA ⁴	Soo4	Increase the PCI to an acceptable level by cleaning entire surface and then sealing the medium- and high-
<u>.</u>	(8,611)	(6.5)	<u> </u>)	severity cracks with a high-quality crack sealant. Structural improvements are required. PCC reconstruction is recommended if this feature is considered a primary taxiway to a Class B runway.
					(Sheet 3 of 8)
1 For planni	For planning purposes only	vluc			

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UFC 3-260-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) requires that the surface be concrete.

Table 3-	Table 3-2 (Continued)	led)			
		Overlay	Overlay Requirement	ents, mm	
	•	,	(in.)		
Feature	Area Sq m (sq yd)	ΑC	PCC Partial Bond	PCC with	Maintenance and Repair Alternatives for Existing Surfaces
					Taxiway F
T13A ²	9755 (11,667)	165 (6.5)	NA ⁴	See ⁴	This feature is rated as failed and should be closed to traffic. PCC reconstruction is recommended if this feature is to withstand the projected traffic and is considered a primary taxiway to a Class B runway.
					Taxiway P
T14C	4181 (5,000)	736 (29.0)	356 (14.0)	381 (15.0)	The PCI of this feature is below that required for taxiways and it is structurally inadequate to support the design traffic. Crack sealing and/or patching is not recommended. PCC reconstruction is recommended if this feature is to withstand the projected traffic and is considered a primary taxiway to a Class B runway.
T15C	16 025 (19,167)	140 (5.5)	NA ⁴	See ⁴	Same as for T14C.
					Short Taxiway F
T16C	2264 (2,708)	445 (17.5)	NA ⁴	See ⁴	The PCI of this feature is below that required for taxiways and it is structurally inadequate to support the design traffic. Crack sealing and/or patching is not recommended. PCC reconstruction is recommended if this feature is to withstand the projected traffic.
					Taxiway H
T17C	3948 (4,722)	(0.0)	NA ⁴	See ⁴	Increase the PCI to an acceptable level by cleaning entire surface and then sealing the medium- and high- severity cracks with a high-quality crack sealant ⁵ . Because of the weathering/raveling, it is suggested that the entire surface be sealed with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance).
T18B	5295 (6,333)	127 (5.0)	NA ⁴	See ⁴	Increase the PCI to an acceptable level by cleaning entire surface and then sealing the medium- and high- severity cracks with a high-quality crack sealant ⁵ . Because of the weathering/raveling, it is suggested that the entire surface be sealed with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). Structural improvements are required.
T19B	697 (833)	59 (22.0)	Ψ Z	330 (13.0)	Increase the PCI to an acceptable level by cleaning entire surface and then sealing the surface with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). Structural improvements are required. Because of the indicated overlay thickness requirements, reconstruction should be considered.
					Taxiway J
T20C	5051 (6042)	178 (7.0)	NA ⁴	See ⁴	Increase the PCI to an acceptable level by deaning entire surface and then sealing the medium-severity cracks with a high-quality crack sealant ⁵ . Because of the weathering/raveling, it is suggested that the entire surface be sealed with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). Structural improvements are required.
•					(Sheet 4 of 8)

¹ For planning purposes only.

² UFC 3-260-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) requires that the surface be concrete.

³ Edges were not evaluated for load-carrying capacity.

⁴ Was not calculated because feature was evaluated as a flexible pavement.

⁵ See TM 5-882-11/AFP 88-6, Chapter 7 (Headquarters, Departments of the Army and Air Force 1993) for guidance.

Area Coverlay Requirements, mm Coverlay Requirements Coverlay Requirements Coverlay Requirements Coverlay Requirements Coverlay Requirements Coverlay Register Coverlay	Table 3-	Table 3-2 (Continued)	(per			
Area (sq yd) PCC (sq yd) AC Bond (no Bond (sq yd)) 5760 76 NA ⁴ See ⁴ (6,889) (3.0) NA 254 (6,889) (3.0) NA 254 (639) (12.5) NA 254 (639) (12.5) NA 254 (1974) (330) NA 254 (2,361) (1016) NA 254 (2,361) (100) NA 254 (2,233) (17.0) (10.0) (10.0) (1,56) (0.0) NA See ⁴ (1,56) (0.0) NA See ⁴ (1,56) (0.0) (12.0) (15.0) (3,597) (14.5) (12.0) (15.0) (21,111) (14.5) NA 445 (48,554) (32.5) NA 445			Overla	y Requireme	ents, mm	
Sq yd) AC Bond PCC with Bond C6,889 C6,889 C6,889 C6,899 C6,999		Area		PCC	:	
5760 76 NA ⁴ See ⁴ (6,889) (3.0) NA 254 (639) (12.5) NA 254 (1974) 330 NA 254 (2,361) (13.0) NA 254 (2,361) (13.0) NA 254 (2,361) (13.0) NA 253 (2,233) (17.0) NA 305 (1,556) (0.0) NA 305 (3,4,167) NA 305 381 (3,597) (17.5) (12.0) (15.0) (21,111) (14.5) (12.0) (15.0) (48,554) (32.5) NA 445 (48,554) (32.5) NA 445	Feature	(sq yd)	AC	Partial Bond	PCC with no Bond	Maintenance and Repair Alternatives for Existing Surfaces
5760 76 NA ⁴ See ⁴ (6,889) (3.0) NA 254 (639) (12.5) NA 254 (1974) 330 NA 254 (2,361) (13.0) NA 254 (2,361) (13.0) NA 254 (2,361) (13.0) NA 254 (2,3122) (40.0) NA 533 (2,233) (17.0) NA 305 (1,556) (0.0) NA 305 (3,597) (0.0) (12.0) (15.0) (21,111) (14.5) NA 445 (48,554) (32.5) NA 445						Taxiway L
1974 318	T21B	5760	76	NA ⁴	See4	Increase the PCI to an acceptable level by cleaning and sealing the medium-severity cracks. A high-quality
(639) (12.5) NA 254 (10.0) (10.0) (2.361) (13.0) NA 254 (10.0) (10.0) (2.361) (10.0) (2.361) (10.0) (2.33) (21.0) (21.0) (2.233) (17.0) NA 305 (12.0) (15.0) (17.5) (17.5)	T22B	534	318	Ą	254	Increase the PCI to an acceptable level by cleaning and sealing the medium-and high-severity cracks. A high-
1974 330 NA 254 (10.0) (10.0) (2,361) (13.0) NA (10.0) (10.0) (2610) (10.0) (10.0) (20.0) (10.0)		(629)	(12.5)		(10.0)	quality sealer ⁵ is recommended. Structural improvements are required. Reconstruction should be considered.
28 567 NA 152 NA 533 (21.0) 1867 432 NA 305 (12.0) 1301 0 NA ⁴ See ⁴ 28 567 NA 152 (6.0) 3008 NA 305 381 31,597 NA 162 (6.0) (12,0) (15,0) 40 596 826 NA 445 (48,554) (32.5) NA 445	T23B	1974 (2,361)	330 (13.0)	NA	(10.0)	Same as for T22B.
1867 432 NA 305 1301 0 NA ⁴ See ⁴ 28 567 NA 152 152 (34,167) NA 305 381 3008 NA 305 381 (3.597) (12.0) (15.0) (21,111) (14.5) NA 445 40 596 826 NA 445 (48,554) (32.5) NA 445	T24B	2610 (3,122)	1016 (40.0)	Ϋ́	533 (21.0)	Same as for T22B.
1867 432 NA 305 (12.0) 1301 0 NA ⁴ See ⁴ (1,556) (0.0) NA 152 (6.0) (6.0) (34,167) NA 305 381 (12.0) (15.0) (15.0) (15.0) (21,111) (14.5) (14.5) (48,554) (32.5) NA 445 (17.5) (17.5)						Taxiway M
1301 0 NA ⁴ See ⁴ 1,556 (0.0) NA ⁴ See ⁴ (1,556) (0.0) NA 152 (6.0) (6.0) (34,167) (12.0) (15.0) (T25B	1867	432	ΝΑ	305	Same as for T22B.
1301 0 NA ⁴ See ⁴ 28 567 NA 152 (6.0) (34,167) NA 305 381 (3,597) NA 305 381 (12.0) (15.0) (15.0) (14.5) NA ⁴ See ⁴ (148,554) (32.5) NA 445		(2,233)	(17.0)		(12.0)	
1301 0 NA ⁴ See ⁴ 28 567 NA 152 (6.0) (6.0) 3008 NA 305 381 (3,597) NA (12.0) (15.0) 17 651 368 NA ⁴ See ⁴ (21,111) (14.5) NA 445 40 596 826 NA 445						Rotary-Wing Taxiway
28 567 NA 152 152 (6.0) (6.0) (34,167) NA 305 381 (12.0) (15.0) (15.0) (15.0) (15.0) (14.5) NA 445 (48,554) (32.5) NA 445	T26B	1301 (1,556)	0 (0.0)	NA ⁴	See4	Increase the PCI to an acceptable level by cleaning entire surface and then sealing with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance).
28 567 NA 152 152 (6.0)						Black Ramp
3008 NA 305 381 (12.0) (15.0) (15.0) 17 651 368 NA ⁴ See ⁴ (21,111) (14.5) NA 445 40 596 826 NA 445 (48,554) (32.5) (17.5)	A1B ²	28 567 (34,167)	ΑN	152 (6.0)	152 (6.0)	The PCI of this feature is above that required for aprons. However, it is recommended that the joints be cleaned and sealed with a high-quality sealer ⁵ . Structural improvements are required.
17 651 368 NA ⁴ See ⁴ (21,111) (14.5) NA 445 (48,554) (32.5) NA 445	A2B ²	3008 (3,597)	۷ ۷	305 (12.0)	381 (15.0)	The PCI of this feature is above that required for aprons. However, it is recommended that the joints be cleaned and sealed with a high-quality sealer ⁵ . Structural improvements are required. PCC reconstruction should be considered.
17 651 368 NA ⁴ See ⁴ (21,111) (14.5) NA ⁴ See ⁴ (48,554) (32.5) NA 445 (17.5)						Brown Ramp
40 596 826 NA 445 (48,554) (32.5) (17.5)	A3B ²	17 651 (21,111)	368 (14.5)	NA ⁴	See ⁴	Increase the PCI to an acceptable level by patching the alligator cracked areas and by cleaning the mediumand high-severity cracks and then sealing them with a high quality crack sealant ⁵ . Structural improvements are required. PCC reconstruction is recommended if aircraft are to be
40 596 826 NA 445 (17.5)						regularly parked on this feature.
	A4B ²	40 596 (48 554)	826	NA	445	Increase the PCI to an acceptable level by cleaning and sealing the medium-and high-severity cracks. A high-
		(100)	(2:-2)		(2:)	quality seated its recommended. If undeptit patches should be applied to contect an depressions and ruced and swelled areas. Structural improvements are required. PCC reconstruction is recommended if aircraft are to be regularly parked on this feature.
						(Sheet 5 of 8)

¹ For planning purposes only.

² UFC 3-260-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) requires that the surface be concrete.

³ Edges were not evaluated for load-carrying capacity.

⁴ Was not calculated because feature was evaluated as a flexible pavement.

⁵ See TM 5-882-11/AFP 88-6, Chapter 7 (Headquarters, Departments of the Army and Air Force 1993) for guidance.

	Igble 5-7 (Confinded)	(Z			
		Overlay	Overlay Requirements, mm (in.) ¹	ants, mm	
Feature	Area Sq m (sq yd)	AC	PCC Partial Bond	PCC with	Maintenance and Repair Alternatives for Existing Surfaces
					Brown Ramp (concluded)
A5B ²	1546 (1,850)	483 (19.0)	279 (11.0)	330 (13.0)	The PCI of this feature is above that required for aprons. Since this feature is composed of eighteen parking pads and not suited for fixed-wing parking, reconstruction is recommended. The new pavement section should be PCC with a thickness capable of withstanding the projected traffic.
A6B ²	2364 (2,827)	178 (7.0)	NA ⁴	See ⁴	Increase the PCI to an acceptable level by cleaning entire surface and then sealing the medium- and high-severity cracks with a high-quality crack sealant. Structural improvements are required. PCC reconstruction is recommended if aircraft are to be regularly parked on this feature.
A7B ²	1650 (1,973)	140 (5.5)	NA ⁴	See ⁴	Same as for A6B.
					Yellow Ramp
A8B ²	7478 (8,944)	178 (23.0)	NA	356 (14.0)	The PCI of this feature is above that required for aprons. However, it is recommended that all medium-and high-severity cracks be cleaned and sealed with a high-quality sealer ⁵ . Structural improvements are required. If
c					_
A9B²	2671 (3,194)	241 (9.5)	⋖ Z	241 (9.5)	Same as for A8B.
A10B ²	3577 (4,278)	365 (25.0)	NA	356 (14.0)	Increase the PCI to an acceptable level by full-depth patching all alligator cracked areas and also by cleaning entire surface and then seal the medium- and high-severity cracks with a high quality crack sealant ⁵ . Structural improvements are required. If this feature is to withstand the project design traffic, reconstruction with PCC is
A11B ²	5433 (6.498)	254 (10.0)	NA	241 (9.5)	Same as for A8B.
A12B ²	25,653 (30,682)	279 (11.0)	NA	241 (9.5)	Increase the PCI to an acceptable level by cleaning entire surface and then seal the medium- and high-severity cracks with a high quality crack sealant ⁵ . Structural improvements are required. If this feature is to withstand the project design traffic, reconstruction with PCC is recommended.
					Apron 1
A14B ²	15 294 (18,292)	0 (0.0)	0 (0.0)	(0.0)	The PCI of this feature is above that required for aprons. However, it is recommended that the joint sealant be removed and replaced with a high-quality sealer ⁵ .
					Green Ramp
A15B ²	36 256 (43,364)	178 (7.0)	NA ⁴	See ⁴	Increase the PCI to an acceptable level by full-depth patching all medium- and high-severity depressions, rutted and aligator cracked areas, and also by cleaning and then sealing all the medium- and high-severity cracks with a high quality crack sealant ⁵ . The subsurface drainage system is in need of repair. Structural improvements are required. If this feature is to withstand the project design traffic, reconstruction with PCC is recommended.
					(Sheet 6 of 8)

For planning purposes only.

² UFC 3-260-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) requires that the surface be concrete.

³ Edges were not evaluated for load-carrying capacity.

⁴ Was not calculated because feature was evaluated as a flexible pavement.

⁵ See TM 5-882-11/AFP 88-6, Chapter 7 (Headquarters, Departments of the Army and Air Force 1993) for guidance.

Table 3-;	Table 3-2 (Continued)	(pai			
		Overlay	Overlay Requirements, mm (in.)	ints, mm	
Feature	Area Sq m (sq yd)	AC	PCC Partial Bond	PCC with	Maintenance and Repair Alternatives for Existing Surfaces
					Green Ramp (concluded)
A16B ²	14 283 (17,083)	178 (7.0)	NA ⁴	See ⁴	Increase the PCI to an acceptable level by cleaning and sealing the medium-and high-severity cracks. A high-quality sealer is recommended. All patched areas should be repaired with full-depth patching. Structural improvements are required. If this feature is to withstand the project design traffic, reconstruction with PCC is recommended.
A17B ²	44 500 (53,223)	165 (6.5)	NA ⁴	See ⁴	Increase the PCI to an acceptable level by cleaning and sealing the medium-and high-severity cracks. A high-quality sealer ⁵ is recommended. Structural improvements are required. If this feature is to withstand the project design traffic, reconstruction with PCC is recommended.
A18B ²	3484 (4,167)	838 (33.0)	394 (15.5)	419 (16.5)	Because of the density and severity of distressed PCC slabs in this feature, removal and reconstruction with PCC is recommended.
					Red Ramp
A19B ²	12 542 (15,000)	0.0)	NA ⁴	See ⁴	The PCI of this feature is above that required for aprons. However, it is recommended that the entire surface be sealed with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). If aircraft are parked on this feature, reconstruction with PCC is recommended.
A20B ²	1784 (2,133)	0.0)	0.0)	0 (0.0)	None
A21B ²	10 933 (13,077)	(0.0)	NA ⁴	See ⁴	Increase the PCI to an acceptable level by sealing entire surface with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). If aircraft are to be parked on this feature, reconstruction with PCC is recommended.
					White Ramp
A22B ²	13 162 (15,742)	(0.0)	NA ⁴	See ⁴	The PCI of this feature is above that required for aprons. However, it is recommended that the entire surface be cleaned and then sealed with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). If aircraft are to be parked on this feature, reconstruction with PCC is recommended.
A23B ²	836 (1,000)	0.0)	0.0)	(0.0)	None
A24B ²	16 933 (20,252)	(0.0)	NA ⁴	See ⁴	The PCI of this feature is above that required for aprons. However, it is recommended that the entire surface be cleaned and then sealed with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). If aircraft are to be parked on this feature, reconstruction with PCC is recommended.
A25B ²	4912 (5,875)	0.0)	(0.0)	0.0)	None
					(Sheet 7 of 8)

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 Edges were not evaluated for load-carrying capacity.
 Was not calculated because feature was evaluated as a flexible pavement.
 See TM 5-882-11/AFP 88-6, Chapter 7 (Headquarters, Departments of the Army and Air Force 1993) for guidance.

Table 3	Table 3-2 (Concluded)	(pap			
		Overla	Overlay Requiremen رنه ک ^ا	ents, mm	
	Area		000		
Feature	Sq m (sq yd)	AC	Partial Bond	PCC with no Bond	Maintenance and Repair Alternatives for Existing Surfaces
					Blue Ramp
A26B ²	13 760 (16,458)	(0.0)	NA ⁴	See ⁴	The PCI of this feature is above that required for aprons. However, it is recommended that the entire surface be cleaned and then sealed with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET web site for product guidance). If aircraft are to be parked on this feature, reconstruction with PCC is recommended.
A27B ²	836 (1,000)	(0.0)	(0.0)	(0.0)	The PCI of this feature is above that required for aprons. However, it is recommended that the cracks be cleaned and sealed with a high-quality sealer ⁵ .
					South Holding Apron
A28B ²	11 293	NA	152	203	The PCI of this feature is above that required for aprons. However, it is recommended that the joint sealant be
	(13,507)		(6.0)	(8.0)	removed and replaced with a high-quality sealer". Structural improvements are required to withstand the projected traffic.
					North Holding Apron
A29B ²	11 346 (13,570)	0 (0.0)	0 (0.0)	0.0)	None.
					Apron 2
A30B ²	7293 (8,722)	102 (4.0)	NA ⁴	See ⁴	The PCI of this feature is above that required for aprons. However, it is recommended that the entire surface be cleaned and then sealed with an approved bituminous pavement sealer (see the PCASE on-line FACT SHEET
					web site for product guidance). If aircraft are to be parked on this feature structural improvements are required. Reconstruction with PCC is recommended.
					(Sheet 8 of 8)

For planning purposes only.

UFC 3-260-02 (Headquarters, Departments of the Army, Navy, and the Air Force 2001) requires that the surface be concrete.

was not carolinear account. To the adduanters, Departments of the Army and Air Force 1993) for guidance. See TM 5-882-11/AFP 88-6, Chapter 7 (Headquarters, Departments of the Army and Air Force 1993) for guidance. 2 UFC 3-260-02 (Headquarters, Ueparumona)
3 Edges were not evaluated for load-carrying capacity.
4 Was not calculated because feature was evaluated as a flexible pavement.

Table 3-3	9		7	<u>.</u>	2	4 K		3	\	2	Claim A land on the A last of	1	<u> </u>						
Maillenailce, Repair, and Major Re	repo	ב		וסני	eball	Aller	lalive		AILIE	<u> </u>	Aemer	11.5, F.R	AIDIE						
		Main	Maintenance								Repair						Maj	Major Repair	
	Seal Repair Partial- Minor Pot- Depth	Repair Pot-		Apply Rejuve-	Seal Major	Full- Depth	Micro-	Slurry	Thin AC	Surface		Porous Friction	Repair Drainage	Surface	AC PCC ES	PCC Structural	Remove Existing Surface and	Hot	Cold
Distress Type	Cracks	Holes		nators1	Cracks	ng	ng	Seal ²	~	Milling	Grooving Course		Facilities ⁴	Recyclin	Overlay ³	Overlay	Reconstruct	Recycle Recycle	Recycle
Alligator cracking	Г	М,Н	M			М,Н	Г	L					L,M,H		M,H	M,H	Н		
Bleeding										A				A			A	A	A
Block cracking	L,M			Г	M,H		L,M	Г						M	M,H			M,H	М,Н
Corrugation			L,M			L,M,H	L,M		M,H	L,M							M,H		
Depression			L,M,H			М,Н	Г		М,Н				L,M,H				Н		
Jet blast				А		A	A		A										
Reflection cracking	L,M				М,Н		L,M	L							М,Н			Н	
Longitudinal and transverse cracking	L,M				М,Н		L,M	L							М,Н			Н	
Oil spillage			A			A			A	A				A			A	A	
Patching	L,M		M		М	М,Н									М,Н		Н	Н	
Polished aggregate							Ą	٧	A	A	Ą	Y		Ą					
Raveling/weathering		М,Н		L,M		M	L,M	L	М,Н	M				М,Н		Н	Н	М,Н	
Rutting			L,M			L,M,H	L						L,M,H		М,Н	Н	Н	М,Н	
Shoving			L			L,M				L,M							М,Н	М,Н	
Slippage cracking	A		A		A	A									A		A	A	
Swell			L,M			М,Н				L,M			L,M,H				Н		
Note: L = low severity level; M = medium severity level; H = high severity level; A = no severity levels for this distress	vel; M = 1	medium	severity le	vel; H = h	igh sever	ity level; A	= no seve	rity leve	ls for this d	istress.									
Not to be used on high speed areas due to increased skid potential.	speed are	as due to	increased	skid pote	ntial.														
3 Datch distrassed areas prior to overlay	' Ifallica. For to ove	reas. arlay																	
4 Drainage facilities to be repaired as needed.	repaired	as neede	ž.																
)	1																		

Table 3-4																	
Maintenance, Repair, and Major Repair Alternatives for Airfield Pavements, Rigid	Repa	ıir, aı	nd Ma	Jor R	epair	Alter	native	s for ,	Airfiel	d Pave	ement	s, Rigi	þ				
		Main	Maintenance								Repair					Majo	Major Repair
Distress Type	Seal Minor Cracks	Joint Seal	Partial Patch	Epoxy Patch	Seal Major Cracks	Full- Depth Patch	Under Sealing	Slab Grind-	Surface Milling	AC Overlay	PCC Overlay	Slab Replace- ment	Crack & Seat with AC Struc- tural Overlay	AC Overlay w/ Geotextile	Repair/ Install Surface/ Subsurface Drainage System¹	PCC Recycling	Remove Existing PCC and Reconstruct
Blowup			L,M			M,H						н					
Corner break				M,H	M,H	M,H						н					
Longitudinal/ Transverse/ Diagonal cracking	L,M				H, W					ェ	ェ	I	M,H	I	L,M,H	ェ	エ
D cracking			H,M		H,'H	I						I				I	Ŧ
Joint seal damage		M,H															
Patching (small) <5 ft2	L,M		M	L,M	M,H	M,H						н					
Patching/utility cut	L,M		M	L,M	M,H	M,H						Н					Н
Popouts ²				Α						А	А						
Pumping	Α	Α			Α		А								А		
Scaling/map cracking			M,H					M,H		M,H	M,H						
Fault/settlement		L,M					M,H	L,M	M,H						L,M,H		
Shattered slab	٦				L,M					М,Н	М,Н	M,H		Н	L,M,H	Н	Н
Shrinkage crack ³																	
Spalling (joints)		_	L,M	L,M,H	M,H	M,H											
Spalling (corner)			L,M	L,M	M,H	M,H											
Note: L = low severity level; M = medium severity level; H = high severity level; A = no severity levels for this distress.	evel; M = 1	medium	severity le	evel; H =	high sever	ity level;	A = no seve	rity levels	for this dis	stress.							

Note: L = low severity level; M = medium severity level; H =

Drainage facilities to be repaired as needed.

Popouts normally do not require maintenance.

Shrinkage cracks normally do not require maintenance.

					Unit (Cost (\$)		
ltem	Description	U/M	FY00	FY01	FY02	FY03	FY04	FY05
	Remove/replace 10 in. PCC w/14 in. PCC including 6 in. base	SY	71.32	73.10	74.92	76.80	78.71	80.68
2	PCC Construction	SY-IN	3.64	3.73	3.87	3.92	4.02	4.12
3	Remove/replace 6 in. Bituminous Pavement w/14 in. PCC including 6 in. base	SY	65.38	67.01	68.69	70.41	72.17	73.97
1	Asphalt Concrete Overlay							
	Airfield Mix	TONS SY-IN	50.34 2.14	51.60 2.20	52.89 2.27	54.21 2.33	55.57 2.40	56.95 2.48
	Highway Mix	TONS SY-IN	46.36 2.52	47.52 2.58	48.71 2.65	49.92 2.71	51.17 2.78	52.45 2.85
5	Joint Resealing (JFR)	LF	2.14	2.19	2.25	2.30	2.36	2.42
;	Joint Resealing (NON - JFR)	LF	1.90	1.95	2.00	2.05	2.10	2.15
7	Crack Routing/Sealing (PCC)	LF	2.63	2.70	2.76	2.83	2.90	2.97
3	Neoprene Compression Joint Seal							
	Saw Cutting Only	LF	1.33	1.36	1.40	1.43	1.47	1.5
	Lubrication, Furnish and Install Compression Seal							
	1/2-in. wide joint	LF	3.30	3.38	3.47	3.55	3.64	3.73
	5/8-in. wide joint 3/4-in. wide joint	LF LF	3.66 4.49	3.75 4.60	3.85 4.72	3.94 4.84	4.04 4.96	4.14 5.09
)	Spall Repairs (Epoxy-Bonded PCC)	SF	25.30	25.93	26.58	27.25	27.93	28.6
10	PCC Pavement Removal (To Base Course) T < 12 in.	SY-IN	1.01	1.04	1.06	1.09	1.12	1.1
11	PCC Pavement Removal (To Base Course) T > 12 in.	SY-IN	1.39	1.46	1.50	1.53	1.57	1.6
12	Asphalt Pavement Removal (to base course)	SY-IN	0.92	0.94	0.97	0.99	1.01	1.04
13	Base/Subgrade Removal	SY-IN	0.61	0.63	0.64	0.66	0.66	0.69
4	Asphalt Milling/Profiling/Grinding (Cold) up to 1-in. depth	SY	1.56	1.60	1.64	1.68	1.72	1.7
	up to 2-in. depth	SY	2.26	2.32	2.37	2.43	2.49	2.5
	up to 3-in. depth	SY	2.38	2.44	2.50	2.56	2.62	2.6
	up to 4-in. depth small difficult jobs (hard agg. etc.)	SY SY-IN	2.50 2.97	2.56 3.04	2.63 3.12	2.69 3.20	2.76 3.28	2.83 3.30
5	PC Concrete Grinding/Profiling (Normally 1/2 in. is max Feasible)	SY-IN	19.02	19.50	19.98	20.48	20.99	21.5
6	Heater-Scarification (3/4—in.) – rejuvenation	SY	1.32	1.35	1.39	1.42	1.46	1.49
7	Cold Recycling 6 in. AC with 4-inthick AC O/L	SY	17.46	17.90	18.34	18.80	19.27	19.7
5 6 7 8 9 10 11 12 13 14 15 16 17 18	Slurry Seal	SY	1.57	1.61	1.65	1.69	1.73	1.78

. 451	e 3-5 (Concluded)	1						
				1		ost (\$)		Т
ltem	Description	U/M	FY00	FY01	FY02	FY03	FY04	FY05
19	Micro-Surfacing	SY	2.26	2.32	2.37	2.43	2.49	2.55
20	Single Bituminous Surface Treatment	SY	1.90	1.95	2.00	2.05	2.10	2.15
21	Double Bituminous Surface Treatment	SY	2.75	2.82	2.89	2.96	3.03	3.11
22	Rubberized Coal Tar Pitch Emulsion Sand Slurry Surface Treatment	SY	1.72	1.76	1.81	1.85	1.90	1.94
23	Rubberized Coal Tar Pitch Emulsion (No Aggregate)	SY	1.13	1.16	1.19	1.22	1.25	1.28
24	Fog Seal	SY	0.77	0.79	0.81	0.83	0.85	0.87
25	Rubberized Asphalt Systems Stress Absorbing Membrane (SAM) Interlayer	SY	4.40	4.51	4.62	4.74	4.86	4.98
	SAM Seal Coat (uncoated chips) SAM Seal Coat (precoated chips)	SY SY	4.64 4.99	4.76 5.11	4.87 5.24	5.00 5.37	5.13 5.50	5.25 5.64
26	Reinforcing Fabric Membranes (including tack coat)	SY	2.47	2.53	2.60	2.66	2.73	2.79
27	Elastomeric Inlay installed in Existing PCC, Complete (2 ft Wide X 100 ft Long X 2 in. Deep)	EA	25.0K	25.6K	26.3K	26.9K	27.6K	28.3K
28	PC Concrete Inlay (20 ft X 120 ft X 12 in. in Asphalt Pavement)	EA	17.8K	18.2K	18.7K	19.2K	19.7K	20.2K
29	Runway Grooving Asphalt Concrete Pavement Portland Concrete Pavement	SY SY	1.90 4.16	1.95 4.26	2.00 4.37	2.05 4.48	2.10 4.59	2.15 4.71
30	Runway Rubber Removal (High Pressure Water Blasting Method)	SF	0.059	0.060	0.062	0.063	0.065	0.066
31	Paint Removal Partial Removal (Remove only loose, flaking, or poorly bonded paint)	SF	0.059	0.060	0.062	0.063	0.065	0.066
	Complete Removal (Using High Pressure water with sand injection)	SF	0.69	0.70	0.72	0.74	0.76	0.78
32	Airfield Marking Reflectorized Non-Reflectorized	SF SF	0.46 0.26	0.47 0.27	0.48 0.27	0.50 0.28	0.51 0.29	0.53 0.29
33	Street Marking Reflectorized Non-Reflectorized	SF SF	0.33 0.21	0.34 0.22	0.27 0.35 0.22	0.36 0.23	0.29 0.37 0.24	0.38 0.24
34	Random Slab Replacement 12 ft by 12 ft by 12-in. thick 25 ft by 25 ft by 12-in. thick 25 ft by 25 ft by 18-in. thick 25 ft by 25 ft slab	EA EA EA SY-IN	1.2K 4.8K 7.1K 5.56	1.2K 4.9K 7.3K 5.70	1.3K 5.0K 7.5K 5.84	1.3K 5.2K 7.6K 5.99	1.3K 5.3K 7.8K 6.14	1.4K 5.5K 8.0K 6.29
35	Soil Cement Stabilization (10 percent by weight)	SY-IN	0.50	0.51	0.53	0.54	0.55	0.57

4 Conclusions

The maintenance and rehabilitation alternatives discussed in Chapter 3 and summarized in Table 3-2 should be performed as soon as possible to retain the full benefit of the structural capacity of the existing pavements. The M & R alternatives suggested for the existing surfaces were selected from the alternatives listed for the various distresses shown in Tables 3-3. In many instances the performance of a specific alternative is dependent upon local conditions and contractors.

The operational ACN for the airfield rigid pavement facilities is 49/R/B/W/T and for the flexible pavement facilities 50/F/A/W/T/. PCNs for each facility are shown in Illustration 1. ISR ratings based on the ACN/PCN ratios and the PCIs of each respective facility are shown in Illustration 2.

Chapter 4 Conclusions 25

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26 References

Appendix A Background Data

Description of the Airfield

LAAF is located in the west part of Fort Benning in Chattahoochee County, GA. It is approximately 12.9 km (8 miles) south of Columbus, GA, on the east bank flood plain of the Chattahoochee River at an elevation 69 m (225 ft) above sea level. The airfield is located physiographically in the east section of the Gulf Coastal plain Province. The soils are of alluvial and residual origin consisting of mostly silty and clayey sand. The principal soil types of the airfield site are classified as lean clays (CL), Silty sand (SM), and clayey sand (SC) under the Unified Soil Classification System.

The airfield is situated on the banks of the Chattahoochee River. The airfield site is drained by a system of catch basins and storm sewers which discharge into open drainage ditches near the perimeter of the airfield.

A layout of the airfield is shown in Figure A1. Pavement feature identifications and locations are shown in Figure A2. In July 2001 the airfield consisted of one active runway (15-33), one inactive runway (03-21), one rotary-wing runway, two parallel taxiways (Taxiway K and A), a primary parking apron (Black Ramp), two holding aprons, and several flexible and rigid parking aprons with connecting taxiways and access pavements. Runway 15-33 was 2499 m (8,200 ft) long and 46 m (150 ft) wide; Runway 03-21 was 1,798 m (5,900 ft) long and 46 m (150 ft) wide.

The climatological data used herein were obtained from the weather station at Fort Benning, Lawson AAF, GA. The annual rainfall in the area is about 1219 mm (48 in.) and the annual snowfall is 10 mm (0.4 in.). The maximum and minimum temperatures were 42 °C and -18 °C (107 °F and 0 °F), respectively. Temperature and precipitation data are summarized in Table A1.

Previous Reports

Pertinent data for use in this evaluation were extracted from the previous reports listed below:

- a. U.S. Army Engineer Waterways Experiment Station, "Airfield Pavement Evaluation, Lawson Army Airfield, Fort Benning, Georgia," Miscellaneous Paper GL-97-12, July 1997, Vicksburg, MS.
- b. U.S. Army Engineer Waterways Experiment Station, "Airfield Pavement Evaluation, Lawson Army Airfield, Fort Benning, Georgia," Miscellaneous Paper GL-93-21, October 1993, Vicksburg, MS.
- c. U.S. Army Engineer Waterways Experiment Station, "Condition Survey, Lawson Army Airfield, Fort Benning, Georgia," Miscellaneous Paper GL-88-19, July 1988, Vicksburg, MS.
- d. U.S. Army Engineer Waterways Experiment Station, "Airfield Pavement Evaluation, Lawson Army Airfield, Fort Benning, Georgia," Miscellaneous Paper GL-85-5, March 1985, Vicksburg, MS.
- e. U.S. Army Engineer Waterways Experiment Station, "Condition Survey, Lawson Army Airfield, Fort Benning, Georgia," Miscellaneous Paper S-69-19, May 1972, Vicksburg, MS.
- f. U.S. Army, Savannah District, "Army Airfield Pavement Evaluation, Lawson Army Airfield, Fort Benning, Georgia," June 1967, Savannah, GA.
- g. U.S. Army, Savannah District, "Army Airfield Pavement Evaluation, Lawson Army Airfield, Fort Benning, Georgia, and Appendix A: Studies Made for Evaluation" June 1967, Savannah, GA.
- h. U.S. Army Engineer Waterways Experiment Station, "Army Airfield Pavement Evaluation, Lawson Army Airfield, Fort Benning, Georgia," Miscellaneous Paper No. 4-411, September 1960, Vicksburg, MS.
- *i.* U.S. Army Engineer Waterways Experiment Station, "Army Airfield Pavement Evaluation, Lawson Army Airfield, Fort Benning, Georgia, and Appendix A: Studies Made for Evaluation," Miscellaneous Paper No. 4-411, September 1960, Vicksburg, MS.
- j. U.S. Army Engineer Waterways Experiment Station, "Army Airfield Pavement Evaluation, Lawson Army Airfield, Fort Benning, Georgia," Technical No. 3-466, Report 9, August 1958, Vicksburg, MS.
- k. U.S. Army Engineer Waterways Experiment Station, "Condition Survey, Report No. 3, Lawson Air Force Base, Fort Benning, Georgia," Miscellaneous Paper No. 4-3, November 1952, Vicksburg, MS.
- *l.* U.S. Army, Mobile District, "Airfield Pavement Capacities Study for Lawson Field, Fort Benning, Georgia," August 1944, Mobile, AL.

Design and Construction History

The original pavements at LAAF were constructed during the period July 1941 through May 1943. Upgrading of the pavements, including new construction for strengthening of existing facilities, was performed at various periods from 1948 through 1994. Design wheel loads were not available for the pavements constructed before 1958. The pavements constructed during the period 1958-1960 were designed to support a single-wheel load of 9,979 kg (22,000 lb) with a tire pressure of 1.38 MPa (200 psi). The reconstruction or strengthening in 1966 was designed for a 45,359 kg (100,000 lb) gear load on twin wheels spaced 952.5 mm (37.5 in.) apart. Table A2 presents the history of the major construction activities at LAAF. Table A3 contains a summary of the physical property data of the various pavement features.

The major construction projects at LAAF are summarized as follows:

- a. 1940-1941 construction. The original parking apron (Brown Ramp) was paved by the Quartermaster Corps with 203-152-152-203 mm (8-6-6-8 in.) PCC. No detailed construction records are available for this construction.
- b. 1941-1943 construction. The runways, taxiways, and parking apron, except for the original parking apron, were constructed during this period under the supervision of the Mobile District, Corps of Engineers. The original parking apron extension (Brown Ramp), Yellow ramp (A8B), and parking Apron 2 (Brown ramp) were constructed of 203-152-152-203 mm (8-6-6-8 in.) PCC on a clayey sand fill material of variable thickness. The extension to the parking apron was designed for 254-178-178-245 mm (10-7-7-10 in.) PCC on 152 mm (6 in.) of clayey sand base course. The runways, except for 90 m (300 ft) on each end, and Taxiway C were designed for 51 mm (2 in.) of AC on 203 mm (8 in.) of sand clay base. Turning pads, 90 m (300 ft) long, on each end of the runways were constructed of 203-152-152-203 mm (8-6-6-8 in.) PCC. Taxiway D, E, F, H, and L were constructed of 38 mm (1.5 in.) AC on a keystone course of 203 mm (8 in.) of sand clay base course.
- c. 1948 construction. In 1948, approximately 1500 sq ft (sta 3+00 to 18+00 ft) of the flexible pavement on the southwest end of the Runway 03-21 was removed and the underlying material undercut to a depth of about 1.7 m (5.5 ft). The area was backfilled with 991 mm (39 in.) of silty sand, 584 mm (29 in.) of slag, and 102 mm (4 in.) AC.
- d. 1950-1951 construction. Runway 15-33 and taxiways H and L were overlaid with 152 mm (6 in.) slag and 51 mm (2 in.) AC during this period. In areas where the original pavement and base course had failed, the unsatisfactory pavement and base course were removed and replaced with slag before the overlay was placed.
- e. 1951-1952 construction. During this period Runway 15-33 was extended 689 m (2,260 ft) to the southeast and Taxiway J and a portion

of Taxiway K were constructed. The pavement was designed for 51 mm (2 in.) AC, 152 mm (6 in.) water-bound macadam (slag) base course, and 254 mm (10 in.) of sand-clay subbase. Select borrow material was used in areas of fill and in areas where unsatisfactory subgrade material was encountered. Taxiways H, J, K, L, and the original portion of Runway 15-33 were sealed with a bituminous seal coat on the taxiways and a fine crushed stone aggregate was used on the runway.

- f. 1958-1960 construction. Facilities constructed during this period included Apron 1 (A14B), Red Ramp (A19B and A21B), White Ramp (A22B, A24B and A25B) and Taxiway K (T2A).
- g. 1963-1964 construction. The Blue Ramp (A26B) and Apron 2 were constructed 51 mm (2 in.) AC surface course and 152 mm (6 in.) stabilized aggregate base course. Fifteen 203 mm (8 in.), 6 m (20 ft) by 9 m (30 ft) PCC helipads (A27B) were constructed in the Blue Ramp.
- h. 1966 construction. During this period Runway 15-33 was extended 617 m (2,024 ft) to the southwest and the north 305 m (1,000 ft) was reconstructed with PCC (R1A and R2A). Taxiway K was extended to the southwest (T1A) and reconstructed (T2A, T3A, T4A, and T5A). Taxiway A, and Taxiway G, North and South Hold Aprons, and Black Ramp (A1B) were constructed with PCC. The Brown Ramp (A3B) was extended to the north. Short Taxiway F and the rotary-wing runway and taxiway was constructed with 51 mm (2 in) AC surface course, 152 mm (8 in.) crushed aggregate base course, and 203 mm (8 in.) sand clay subbase.
- i. 1967 maintenance and repair. A 25 mm (1 in.) AC overlay was placed on the entire length of Runway 03-21. Taxiway E (T12A) and Taxiway D (T11A) were sealed with an emulsified asphalt slurry. A bituminous seal coat and a 44 mm (1.75 in.) AC overlay were placed on Taxiway H (T18B and T19B) and Taxiway L (T21B, T22B, T23B, and T24B).
- j. 1970-1971 maintenance and repair. A bituminous seal coat and a 38 mm (1.5 in.) AC overlay were placed on portions of the Brown Ramp (A4B) and portions of the Yellow Ramp (A8B, A9B, A10B, A11B, and A12B) Taxiway F was reconstructed with 25 mm (1 in.) AC surface course, 38 mm (1.5 in.) AC binder course, 203 mm (8 in) base course, and 102 mm (4 in.) of subbase.
- k. 1977-1978 maintenance and repair. Rubber deposits were removed from the touch-down areas on Runway 15-33. Either vegetation was removed and cracks were cleaned and sealed, or fuel-damaged pavement was removed and patched with AC which was then sealed with a fuel-resistant sealer for the following features: Runway 15-33 (R3C, R4C, R5C, R6C, R7C, R8C and R9C), Runway 03-21 (R5A, R16A, and R17C and R18C south of Runway 15-33), rotary-wing runway and taxiway (R22B and T26B), Taxiway K (T6A), Taxiway B (T9A), Taxiway C

(T10C), Taxiway F (T13A), Taxiway H (T17C), Brown Ramp (A3B, A4B and A6B), Yellow Ramp (A7B, A8B, A9B, A10B, A11B, and A12B), Red Ramp (A19B and A21B), White Ramp (A22B and A24B), and Blue Ramp A26B). The vegetation was removed from the cracks, a bituminous slurry seal applied to the surface and a 51 mm (1 in.) thick AC overlay was placed on the following: Taxiway H (T18B), Taxiway L (T21B and T22B), Taxiway M (T25B) and the Green Ramp (A16B). Vegetation was removed from the cracks and a bituminous slurry seal applied to the surface on the following: Taxiway D (T11A), Taxiway E (T12B), Taxiway P (T15C), and the Blue Ramp (A26B). Maintenance projects such as removal of vegetation, removal and replacement of deteriorated pavement, crack sealing, and placement of a 25 mm (1 in.) AC overlay were performed on the Yellow Ramp (A13B), Green Ramp (A15B and A17B) and Apron 2 (A30B).

- 1. 1979 maintenance and repair. A 51 mm (2 in.) AC overlay was placed on Runway 03-21 (R15A, R16A, R17C, R18C, R19C, and R20A), and a 38 mm (1.5 in) AC overlay was placed on Taxiway D (T11A), Taxiway E (T12A), Taxiway P (T15C) Taxiway H (T17C), and Taxiway K (T6A).
- m. 1981 maintenance and repair. Rubber deposits were removed from the touch-down areas on Runway 15-33. AC overlays 32 mm (1.25 in.) were placed on the rotary-wing runway (R22B) and taxiway (T26B), Red Ramp (A19B and A21B), White Ramp (A22B and A24B) and Blue Ramp (A26B). AC overlays 38 mm (1.5 in.) were placed on portions of Taxiway L (T24B) and Taxiway M (T25B) and portions of the Yellow Ramp (A7B, A8B, A9B, and A11B). Twelve 203 mm (8 in.), 12 m (40 ft) by 12 m (40 ft) PCC helipads (A20B) were constructed in the Red Ramp and fifteen 203 mm (8 in), 6 m (20 ft) by 9 m (30 ft) PCC helipads (A23B) were constructed in the White Ramp.
- n. 1986 maintenance and repair. A 76 mm (3 in.) AC overlay was placed on Runway 15-33 (R8C and R9C) and a 38 mm (1.5 in.) AC overlay was placed on Runway 15-33 (R3C and R4C). A seal coat was placed on the remaining AC portions of Runway 15-33 and all of Runway 03-21.
- o. 1994 maintenance and repair. During this period the center 15 m (50 ft) of Runway 15-33 from station 0+00 to 10+00 was removed and replaced with 457 mm (18 in.) of PCC and a 152 mm (6 in.) bonded PCC overlay was placed on the outer 15 m (50 ft) edges. A 102 mm (4 in.) AC overlay was placed on Runway 15-33 from station 10+00 to 72+00.

Traffic History

The airfield manager provided traffic records for LAAF at the time of this evaluation for the 1-year period January 2000 through December 2000. These records indicate that the airfield is utilized by both fixed-wing and rotary-wing

aircraft. The airfield was divided into two primary traffic regions, fixed-wing (airfield) and rotary-wing (heliport) for evaluation purposes. It should be noted that fixed-wing portion of the airfield are subjected to both fixed-wing and rotary-wing traffic, while the heliport supports only rotary-wing aircraft operations. Frequencies of operation for the various aircraft are well-defined by accurate records presented in Table A4. As shown in Table A4, the primary fixed-wing aircrafts are the C-17, C-141, and C-130. The rotary-wing aircraft using the airfield and heliport is the UH-60 and CH-47. According to the LAAF Operations Office personnel, the day-to-day traffic presented in Table A4 is representative and is not expected to increase significantly during the remaining life of the pavement.

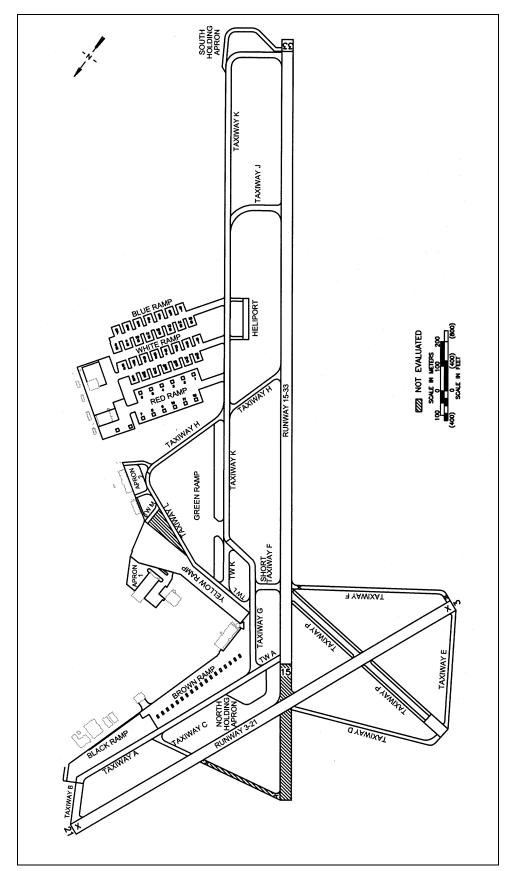


Figure A1. Layout of airfield and facility identifications

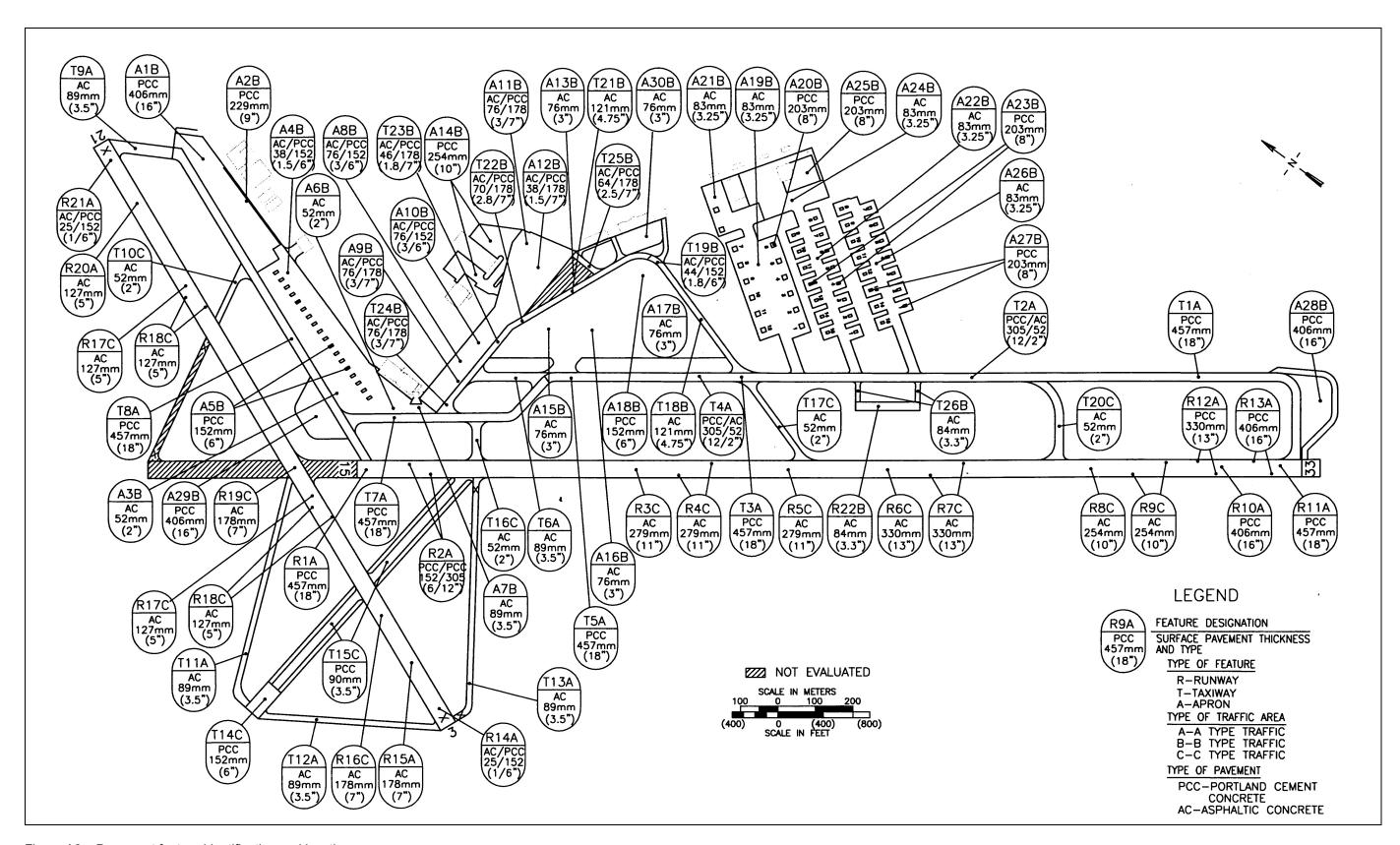


Figure A2. Pavement feature identification and locations

Appendix A Background Data

Table A1 Climatological Data Summary	Jata Sur	nmary												
	٦	F	M	٧	M	ſ	ſ	٧	S	0	Z	Q	ANN	YRS REC
					Te	Temperature, °C (°F)	, °C (°F)							
Highest	29 (84)	28 (83)	32 (90)	34 (93)	37 (99)	41 (105)	42 (107)	41 (105)	38 (101)	37 (99)	31 (87)	29 (84)	42 (107)	61
Mean Daily Max	14 (58)	17 (62)	21 (69)	25 (77)	29 (84)	32 (90)	33 (91)	33 (91)	30 (86)	26 (78)	20 (68)	16 (60)	24 (76)	61
Mean	8 (47)	10 (50)	14 (57)	18 (64)	23 (72)	26 (79)	27 (81)	27 (81)	24 (76)	19 (66)	13 (56)	9 (49)	18 (65)	61
Mean Daily Min	2 (36)	3 (38)	7 (44)	11 (51)	16 (60)	20 (68)	22 (71)	21 (70)	18 (65)	12 (53)	6 (43)	3 (37)	12 (53)	61
Lowest	-18 (0)	-13 (7)	-9 (16)	-2 (29)	3 (37)	8 (47)	13 (55)	14 (57)	3 (38)	-3 (26)	-11 (12)	-15 (5)	-18 (0)	61
					Pre	Precipitation, mm (in.)	, mm (in.)							
Mean	109 (4.3)	112 (4.4)	142 (5.6)	104 (4.1)	91 (3.6)	97 (3.8)	137 (5.4)	99 (3.9)	84 (3.3)	53 (2.1)	84 (3.3)	117 (4.6)	1 232 (48.5)	61
					<i>S</i>	Snowfall, mm (in.)	ım (in.)							
Mean	3 (0.1)	5 (0.2)	#	0	0	0	0	0	0	0	#	3 (0.1)	10 (0.4)	61
					R	Relative Humidity, %	nidity, %							
Mean 0600 LST 1600 LST	80 50	81 46	83 44	87 42	90	89	90	92 55	89 52	85 46	83 48	81 50	86 49	61
Source of data: www.afccc.af.mil/climo Fort Benning, Georgia # Denotes less than 1 mm (0.05 in.).	rcc.af.mil/c mm (0.05 ir	climo Fort [1.).	Senning, G	eorgia										

Construction History				1
David San William	Surface Pay	vement	0	
Pavement Facility (Feature)	Thickness,		Construction	Aganau
(reature)	mm (in.)	Type	Date	Agency
	Fixed-Wing Faci	lities		
Runway 15-33	054 (40.0)2	4.0	1011 1010	05
R1A, R2A, R3C and R4C	254 (10.0) ² 154 (6.0) ³	AC PCC	1941-1943	CE CE
R5C	104 (0.0)	AC	1941-1943	CE
R1A, R2A, R3C, R4C and R5C	203 (8.0) ⁴ 457 (18.0) ²	AC AC	1950-1951 1951-1952	CE
R5C	305 (12.0) ⁴	PCC	1966	CE
R1A	279 (11.0) ⁴	PCC	1966	CE
R2A	127 (5.0)	AC	1966	CE
R3C, R4C and R5C	38 (1.5) ⁴	AC	1986	CE
R3C	178 (7.0) ⁴	AC	1966	CE
R6C and R7C	170 (7.0)	SS	1986	CE
R5C, R6C and R7C R8C and R9C	610 (24.0) ²	AC	1966	CE
R8C and R9C	76 (3.0) ⁴	AC	1986	CE
R10A and R13A	406 (16.0)	PCC	1966	CE
R10A and R15A R11A	457 (18.0)	PCC	1966	CE
R12A	330 (13.0)	PCC	1966	CE
R1A	102 (18 0) 6	PCC	1994	CE
R2A	152 (6.0) ⁴	PCC	1994	CE
R3C, R4C, R5C, R6C, R7C, R8C	102 (4.0)4	AC	1994	CE
and R9C	, ,			
Runway 03-21				+
R14A and R21A	152 (6.0) ³	PCC	1941-1943	CE
R17C, R19C, and R20A	152 (6.0) ³ 254 (10.0) ²	AC	1941-1943	CE
R15A and R16A	686 (27.0) ²	AC	1948	CE
R19C	203 (8.0)4	AC	1950-1951	CE
R14A, R15A, R16A, R17C,	25 (1.0) ^⁴	AC	1967	CE
R19C, R20A, and R21A	, ,			
R15A, R16A, R17C, R19C, and	51 (2.0) ⁴	AC	1979	CE
R20A				
R14A, R15A, R16A, R17C,	⁵	SS	1986	CE
R19C, R20A, and R21A				
Taxiway K	2			
T6A and T4A	406 (16.0) ²	AC	1951-1952	CE
T2A	406 (16.0) ²	AC	1959-1960	CE
T1A, T3A, and T5A	457 (18.0)	PCC	1966	CE
T2A and T4A	305 (12.0)4	PCC	1966	CE
T6A	38 (1.5) ⁴	AC	1979	CE
Taxiway G	406 (49.0)	PCC	1066	CE
T7A	406 (18.0)	PCC	1966	CE
Taxiway A	254 (10.0)	DCC.	1066	CE
T8A Taxiway B	254 (10.0)	PCC	1966	CE
T9A	457 (18.0) ²	AC	1941-1943	CE
T9A	38 (1.5) ⁴	AC	1979	CE
Taxiway C	00 (1.0)	,	1010	- 02
T10C	254 (10.0) ²	AC	1941-1943	CE
Taxiway D	204 (10.0)	AC	1341-1343	OL
T11A	25 (10.0) ²	AC	1941-1943	CE
T11A	38 (1.5) ⁴	AC	1979	CE
Taxiway E	00 (1.0)	, 10	1070	0_
	25 (10.0) ²	1 40	1011 1012	
T12A	$25 (10.0)^2$	AC	1941-1943	CE

(Sheet 1 of 3)

¹ CE = U.S. Army Corps of Engineers; QM = Quarter Master Corps.

² Thickness includes AC, base, and subbase.

³ Edges thickened to 8 in.

Overlay pavement.
 Slurry seal - nominal thickness.
 Reconstructed.

Table A2 (Continued)				
	Surface Pa	vement		
Pavement Facility	Thickness,		Construction	
(Feature)	mm (in.)	Type	Date	Agency
	Fixed-Wing Faci	lities		•
Taxiway F				
T13A	368 (14.5) ²	AC	1971	CE
T13A	25 (1.0) ⁴	AC	1981	CE
Taxiway P	2			
T14C	152 (6.0) ³ 254 (10.0) ²	PCC	1941-1943	CE
T15C	254 (10.0) ²	AC	1941-1943	CE
T15C	38 (1.5) ⁴	AC	1979	CE
Taxiway Short F	406 (46.0)2	40	1066	CE
T16C Taxiway H	406 (16.0) ²	AC	1966	CE
T17C and T18B	254 (10.0) ²	AC	1941-1943	CE
T19B	152 (6.0) ³	PCC	1941-1943	CE
T17C and T18B	203 (8.0)4	AC	1950-1951	CE
T18B and T19B	45 (1.75)	AC	1967	CE
T18B	25 (1.0)4	AC	1978	CE
T17C	38 (1.5) ⁴	AC	1979	CE
Taxiway J	` _			
T20C	381 (15.0) ²	AC	1951-1952	CE
Taxiway L				
T21B	$254 (10.0)^2$	AC	1941-1943	CE
T22B, T23B, and T24B	178 (7.0) ⁵ 203 (8.0) ⁴	PCC	1941-1943	CE
T21B	203 (8.0)4	AC	1950-1951	CE
T21B, T22B, T23, and T24B	45 (1.75) ⁴	AC	1967	CE CE
T21B and T22B T24B	25 (1.0) ⁴ 38 (1.5) ⁴	AC AC	1978 1981	CE
Taxiway M	30 (1.3)	AC	1901	CL
T25B	178 (7.0) ⁵	PCC	1941-1943	CE
T25B	25 (1.0)	AC	1978	CE
T25B	38 (1.5) ⁴	AC	1979	CE
Black Ramp				
A1B	406 (16.0)	PCC	1966	CE
A2B	229 (9.0)	PCC	1966	CE
Brown Ramp				
A4B	152 (6.0)	PCC	1940-1943	QM&C
A6B	254 (10.0) ²	AC	1940-1943	E
A6B	203 (8.0) ³ 254 (10.0) ²	AC	1950-1951	CE
A3B		AC	1966	CE
A4B A5B	38 (1.5) 152 (6.0)	AC PCC	1970 Unknown	CE CE
Yellow Ramp	132 (0.0)	FCC	OTIKITOWIT	CL
A8B and A10B	152 (6.0) ³	PCC	1941-1943	CE
A9B, A11B and A12B	178 (7.0)	PCC	1941-1943	CE
A7B	254 (10.0) ³	AC	1966	CE
A8B, A9B, A10B, A11B, and	38 (1.5) ⁴	AC	1970	CE
A12B	·			
A13B	25 (1.0) ⁴	AC	1978	CE
A7B, A8B, A9B, and A11B	38 (1.5) ⁴	AC	1981	CE
Apron 1				
A14B	254 (10.0)	PCC	1958-1959	CE

(Sheet 2 of 3)

A13 Appendix A Background Data

CE = U.S. Army Corps of Engineers; QM = Quarter Master Corps.
Thickness includes AC, base, and subbase.

Edges thickened to 8 in.
Overlay pavement.
Slurry seal - nominal thickness.
Reconstructed.

Table A2 (Concluded)				
	Surface Par	vement		
Pavement Facility	Thickness,		Construction	
(Feature)	mm (in.)	Type	Date	Agency
	Fixed-Wing Faci	lities		
Green Ramp				
A18B	152 (6.0)	PCC	1941-1943	CE
A16B	$254 (10.0)^2$	AC	1941-1943	CE
A15B and A17B	203 (8.0) ²	AC	1964	CE
A15B, A16B, and A17B	25 (1.0) ⁴	AC	1978	CE
South Holding Apron				
A28B	406 (16.0)	PCC	1966	CE
North Holding Apron				
A29B	406 (16.0)	PCC	1966	CE
Apron 2				
A27B	203 (8.0) ²	AC	1964	CE
A27B	25 (1.0) ⁴	AC	1978	CE
	Rotary-Wing Fac	ilities		
Rotary-Wing Runway				
R22B	$406 (16.0)^2$	AC	1966	CE
R22B	32 (1.25) ⁴	AC	1981	CE
Access Taxiways for Rotary -				
Wing R/W				
T26C	406 (16.0)	AC	1966	CE
T26C	32 (1.25)	AC	1981	CE
Red Ramp				
A19B and A21B	$(9.0)^2$	AC	1959-1960	CE
A20B	203 (8.0)	PCC	1981	CE
A19B and A21B	32 (1.25) ⁴	AC	1981	CE
White Ramp	000 (0.5)2		40-0 4000	
A22B and A24B	$(9.0)^2$	AC	1959-1960	CE
A25B	203 (8.0)	PCC	1959-1960	CE
A23B	203 (8.0)	PCC	1981	CE
A22B and A24B	32 (1.25) ⁴	AC	1981	CE
Blue Ramp	000 (0.0)	D00	4004	05
A27B	203 (8.0)	PCC	1964	CE
A26B	203 (8.0) ²	AC	1964	CE
A26B	32 (1.25) ⁴	AC	1981	CE
	· · · · · · · · · · · · · · · · · · ·	·	(O.I.	of 2 of 2)

(Sheet 3 of 3)

CE = U.S. Army Corps of Engineers; QM = Quarter Master Corps.
Thickness includes AC, base, and subbase.
Edges thickened to 8 in.
Overlay pavement.
Slurry seal - nominal thickness.
Reconstructed.

Tak Sui	Table A3 Summary of Physical Property Data	Physi	cal P	opert)	/ Data													
		Facility			ď	Overlay Pavement		6	Pavement			Base			Subbase		Subgrade	rade
төатыгө	Identification	Length m (ft)	Width m (ft)	General Conditio n PCI	Thickness¹ mm (in.)	Descriptio n	Flex. Str. MPa (psi)	Thickness¹ mm (in.)	Descriptio n	Flex. Str.¹ MPa (psi)	Thickness¹ Mm (in.)	Descriptio n	Modulus² MPa (psi)	Thickness ¹ mm (in.)	Descriptio n	Modulus² MPa (psi)	Descriptio n	Modulus² MPa (psi)
Fixe	Fixed-Wing Facilities	ies																
R1A	Runway 15-33	305 (1,000)	15 (50)	Excellent				457(18.0)	PCC		254 (10.0)	Base (GW)	178 (25,835)	203 (8.0)			Silty Sand (SM)	178 (25,835)
R2A	Runway 15-33	305 (1,000)	30 (100)	Excellent	152(6.0)	PCC (Unbound)		305 (12.0)	PCC	4.8 (700)	51 (2.0) 152 (6.0) 51 (2.0)	AC Slag (GP) AC	°-	203 (8.0)	Silty Sand (SM)	°-	Silty Sand (SM)	" _!
R3C	Runway 15-33	797 (2,616)	15 (50)	Very good	102 (4.0) 127 (5.0)	AC AC		51 (2.0)	AC		152 (6.0) 51 (2.0)	Slag (GP) AC	977 (141,671)	203 (8.0)	Silty Sand (SM)	157 (22,777)	Silty Sand (SM)	157 (22,777)
R4C	Runway 15-33 (Runway Edges)	797 (2,616)	30 (100)	Very good	102 (4.0) 127 (5.0)	AC AC		51 (2.0)	AC		152 (6.0) 51 (2.0)	Slag (GP) AC	":	203 (8.0)	Silty Sand (SM)	":	Silty Sand (SM)	n-1
R5C	Runway 15-33	91 (300)	46 (150)	Very good	102 (4.0) - 127 (5.0)	AC Slurry Seal AC		51 (2.0)	AC		152 (6.0)	Slag (GP)	1 551 (225,000)	152 (6.0)	PCC	9 940 (1.44×10 ⁶)	Lean Clay (CL)	158 (22,938)
R6C	Runway 15-33	(2,260)	15 (50)	Very good	102 (4.0) - 178 (7.0)	AC Slurry Seal AC		51 (2.0)	AC		152 (6.0)	Slag (GP)	1 551 (225,000)	254 (10.0)	Clayey Sand (SC)	159 (23,076)	Silty Sand (SM)	159 (23,076)
R7C	Runway 15-33 (Runway Edges)	(2,260)	30 (100)	Very good	102 (4.0) 178 (7.0)	AC Slurry Seal AC		51 (2.0)	AC		152 (6.0)	Slag (GP)	"l	254 (10.0)	Clayey Sand (SC)	"l	Silty Sand (SM)	"!
R8C	Runway 15-33	312 (1,024)	15 (50)	Very good	102 (4.0) 76 (3.0)	AC AC		76 (3.0)	AC		_		489 (70,983)			141 (20,425)		141 (20,425)
R9C	Runway 15-33 (Runway Edges)	312 (1,024)	30 (100)	Very good	102 (4.0) 76 (3.0)	AC AC		76 (3.0)	AC		229 (9.0)	Graded Crushed Aggregate (GW)	°ı	305 (12.0)	Sand Clay (SC)	°:	Silty Sand (SM)	
R10A	Runway 15-33	152 (500)	23 (75)	Very good				406(16.0)	PCC	4.8 (700)	102 (4.0)	Sand Clay	196 (28,387)				Silty Sand (SM)	196 (28,387)
R11A	Runway 15-33	152 (500)	Varies	Very good				457(18.0)	PCC	4.8 (700)	102 (4.0)	Sand Clay	180 (26,176)				Silty Sand (SM)	180 (26,176)
Valu 2 Mod 3 Str	Values from original construction data and/or measurements recorded in previous investigations. Modulus values used for the structural analysis of the pavement features. Structural analysis was not performed on runway edges.	nstruction or the struc not perfor	data and/o :tural analy rmed on ru	r measurem sis of the pa nway edges.	ents recorded vement featur	in previous ir es.	vestigat	ions.									(S)	Sheet 1 of 8)

Appendix A Background Data

Tab	Table A3 (Continued)	ntinu	(pe															
		Facility			_ &	Overlay Pavement		ď	Pavement			Base			Subbase		iqns	Subgrade
тоит⊃го	Identification	ے	Width m (ft)	General Conditio n PCI	Thickness ¹ mm (in.)	Descriptio n	Flex. Str. 1	Thickness ¹ mm (in.)	Descriptio n	Flex. Str. 1 MPa (psi)	Thickness ¹ Mm (in.)	ء ق	Modulus² MPa (psi)	Thickness ¹ mm (in.)	Descriptio n	Modulus ² MPa (psi)	Descriptio n	Modulus² MPa (psi)
Fixec	Fixed-Wing Facilities (Continued)	ies (Cor	ntinued															
R12A	Runway 15-33	152 (500)	23 (75)	Very good				330(13.0)	PCC	4.8 (700)	178 (7.0)	Sand Clay	<u>"</u> !				Silty Sand (SM)	":
R13A	Runway 15-33	Varies	Varies	Very good				406(16.0)	PCC	4.8 (700)	152 (6.0)	Sand Clay	";				Sifty Sand (SM)	":
R14A	Runway 03-21	91 (300)	46 (150)	Poor	25 (1.0)	AC Slurry Seal		152 (6.0)	PCC	(480)							Lean Clay (CL)	84 (12,197)
R15A	Runway 03-21	213 (700)	46 (150)	Fair	76 (3.0)	AC Slurry Seal		102 (4.0)	AC		584 (23.0)	Slag (GP)	625 (90,683)				Sifty Sand (SM)	189 (27,448)
R16C	Runway 03-21	243 (800)	46 (150)	Fair	76 (3.0)	AC Slurry Seal		102 (4.0)	AC		584 (23.0)	Slag (GP)	172 (24,992)				Sifty Sand (SM)	122 (17,698)
R17C	Runway 03-21	884 (2,900)	15 (50)	Poor	76 (3.0)	AC Slurry Seal		51 (2.0)	AC		203 (8.0)	Silty Sand (SM)	155 (22,507)				Sifty Sand (SM)	103 (14,995)
R18C	Runway 03-21	884 (2,900)	30 (100)	Fair	76 (3.0)	AC Slurry Seal		51 (2.0)	AC		203 (8.0)	Silty Sand (SM)	":				Silty Sand (SM)	°:
R19C	Runway 03-21	61 (200)	46 (150)	Fair	76 (3.0)	AC Slurry Seal		51 (2.0)	AC		152 (6.0) 51 (2.0)	Slag (GP) AC	930 (134,876)	203 (8.0)	Silty Sand (SM)	113 (16,445)	Sifty Sand (SM)	113 (16,445)
R20A	Runway 03-21	213 (700)	46 (150)	Fair	76 (3.0)	AC Slurry Seal		51 (2.0)	AC		203 (8.0)	Silty Sand (SM)	92 (13,395)				Silty Sand (SM)	94 (13,565)
R21A	Runway 03-21	91 (300)	46 (150)	Poor	25 (1.0)	AC Slurry Seal		152 (6.0)	PCC	(480)							Lean Clay (CL)	89 (12,934)
																		(Sheet 2 of 8)
Value Modu	Values from original construction data and/or measurements recorded Modulus values used for the structural analysis of the pavement featur structural analysis was not performed on runway edges.	nstruction (or the struct not perfor	tata and/o ural analy ned on ru	r measurem sis of the pa nway edges.	ents recorded vement featur	in previous investigations. res.	vestigati	ons.										

Tab	Table A3 (Continued)	ntinu	(pa										1	Ì				
		Facility			<u> </u>	Overlay Pavement		_	Pavement			Base			Subbase		iqns	Subgrade
төст⊐гө	Identification	Length m (ft)	Width m (ft)	General Conditio n PCI	Thickness ¹ mm (in.)	Descriptio n	Flex. Str. 1 MPa (psi)	Thickness ¹ mm (in.)	Descriptio n	Flex. Str. MPa (psi)	Thickness ¹ Mm (in.)	Descriptio n	Modulus² MPa (psi)	Thickness ¹ mm (in.)		Modulus² MPa (psi)	Descriptio n	Modulus² MPa (psi)
Fixed	Fixed-Wing Facilities (Continued)	ies (Co	ntinued				11											
T1A	Taxiway K	960 (3,150)	23 (75)	Very good				457(18.0)	PCC	4.8 (700)	102 (4.0)	Sand Clay	100 (14,440)				Silty Sand (SM)	100 (14,440)
T2A	Taxiway K	640 (2,100)	23 (75)	Very good	305 (12.0)	PCC	4.8 (700)	51 (2.0)	AC		178 (7.0)	Graded Crushed Aggregate (GW)	276 (40,000)	178 (7.0)	Sandy Clay (SC)	119 (17,190)	Silty Sand (SM)	119 (17,190)
T3A	Taxiway K	107 (350)	23 (75)	Very good				457(18.0)	PCC	4.8 (700)	102 (4.0)	Sand Clay (SC)	171 (24,780)				Silty Sand (SM)	171 (24,780)
T4A	Taxiway K	373 (1,225)	23 (75)	Very good	305 (12.0)	PCC	4.8 (700)	51 (2.0)	AC		178 (7.0)	Graded Crushed Aggregate (GW)	310 (45,000)	178 (7.0)	Sand Clay (SC)	102 (14,825)	Silty Sand (SM)	102 (14,825)
T5A	Taxiway K	107 (350)	23 (75)	Excellent				457(18.0)	PCC	4.8 (700)	102 (4.0)	Sandy Clay (SC)	171 (24,800)				Silty Sand (SM)	171 (24,800)
T6A	Taxiway K	183 (600)	23 (75)	Fair	38 (1.5)	AC		51 (2.0)	AC		178 (7.0)	Graded Crushed Aggregate (GW)	607 (88,083)	178 (7.0)	Gravelly Sand	171 (24,811)	Silty Sand (SM)	171 (24,811)
T7A	Taxiway G	576 (1,890)	23 (75)	Very good				457(18.0)	PCC	4.8 (700)	102 (4.0)	Sand Clay (SC)	151 (21,939)				Silty Sand (SM)	151 (21,939)
T8A	Taxiway A	966 (3,170)	23 (75)	Very good				457(18.0)	PCC	4.8 (700)	152 (6.0) (9)	Sand Clay (SC)	170 (24,963)				Silty Sand (SM)	170 (24,963)
T9A	Taxiway B	162 (530)	23 (75)	Poor	38 (1.5)	AC		51 (2.0)	AC		203 (8.0)	Silty Sand (SM)	151 (21,863)				Silty Sand (SM)	118 (17,168)
T10C	Taxiway C	160 (525)	15 (50)	Poor				51 (2.0)	AC		203 (8.0)	Silty Sand (SM)	562 (81,482)				Silty Sand (SM)	118 (17,101)
T Value		nstruction or the struc	data and/o tural analy	or measurem	ents recorded	in previous in	ivestigat	ions.										(Sheet 3 of 8)

Tab	Table A3 (Continued)	ntinu	ed)															
		Facility			А	Overlay Pavement		4	Pavement			Base			Subbase		gns	Subgrade
пострго	Identification	Length m (ft)	Width m (ft)	General Conditio n PCI	Thickness ¹ mm (in.)	Descriptio n	Flex, Str. [†] MPa (psi)	Thickness ¹ mm (in.)	Descriptio n	Flex. Str. ¹ MPa 7	Thickness ¹ I	Description	Modulus² MPa (psi)	Thickness ¹ I	Descriptio	Modulus² MPa (bsi)	Descriptio n	Modulus ² MPa (psi)
Fixec	I-Wing Facilit	ies (Co	ntinuec	(1														
T11A	T11A Taxiway D 625 15 (2.050) (50)	625 (2,050)	15 (50)	Poor	38 (1.5)	AC		51 (2.0)	AC		203 (8.0)	Silty Sand (SM)	44*				Silty Sand (SM)	7*
T12A	Taxiway E	472 (1,550)	15 (50)	Fair	38 (1.5)	AC		51 (2.0)	AC		203 (8.0)	Silty Sand (SM)	45⁴				Silty Sand (SM)	74
T13A	Taxiway F	640 (2,100)	15 (50)	Failed	25 (1.0)	AC		64 (2.5)	AC		203 (8.0)	Graded Crushed Aggregate (GW)	45*	102 (4.0)	Silty Sand (SM)	*-	Silty Sand (SM)	7.
T14C	Taxiway P	91 (300)	46 (150)	Fair				152 (6.0)	PCC	3.3 (480)							Lean Clay (CL)	59 (8,588)
T15C	Taxiway P	701 (2,300)	23 (75)	Poor	38 (1.5)	AC		51 (2.0)	AC		203 (8.0)	Silty Sand (SM)	45⁴				Silty Sand (SM)	74
T16C	Short Taxiway F	99 (325)	23 (75)	Poor				51 (2.0)	AC		152 (6.0)	Graded Crushed Aggregate (GW)	343 (49,708)	203 (8.0)	Sand Clay (SC)	108 (15,733)	Silty Sand (SM)	108 (15,733)
T17C	Тахімау Н	259 (850)	15 (50)	Fair	38 (1.5)	AC		51 (2.0)	AC	/	152 (6.0) 51 (2.0)	Slag (GP) AC	1 551 (225,000)	203 (8.0)	Silty Sand (SM)	135 (19,606)	Silty Sand (SM)	135 (19,606)
T18B	Тахімау Н	347 (1,140)	15 (50)	Fair	70 (2.75)	AC		51 (2.0)	AC	. 4/	152 (6.0) 51 (2.0)	Slag (GP) AC	841 (121,945)	203 (8.0)	Silty Sand (SM)	94 (13,615)	Silty Sand (SM)	94 (13,615)
T19B	Тахімау Н	46 (150)	15 (50)	Fair	45 (1.75)	AC		152 (6.0)	PCC	3.3 (480)							Lean Clay (CL)	112 (16,310)
T20B	Taxiway J	221 (725)	23 (75)	Fair				51 (2.0)	AC		152 (6.0)	Slag (GP)	503 (73,008)	178 (7.0)	Clayey Sand (SC)	125 (18,084)	Silty Sand (SM)	125 (18,084)
																		(Chest 4 e.f. 0)

Values from original construction data and/or measurements recorded in previous investigations. Modulus values used for the structural analysis of the pavement features.

CBR values from LOW (Low Volume Evaluation Program).

A18

Free classes Free	Tab	Table A3 (Continued)	ntinu	(pa															
Continue Lingth Width Condition Continue Co			Facility			Δ.	Overlay avement		ď	avement			Base			Subbase		qns	grade
Taxiway L 150	төст⊐гө	Identification	Length m (ft)	Width m (ft)		Thickness ¹	Descriptio n		Thickness ¹ mm (in.)	Descriptio n		Thickness ¹ Mm (in.)	Description		Thickness¹ mm (in.)	Descriptio	Modulus² MPa (psi)	Descriptio n	Modulus² MPa (psi)
Taxwey L 1378 153	Fixe	d-Wing Facilit	ies (Co	ntinued				1											
Taxiway L 356 Varies Fair 70 (2.15) AC 178 (7.0) PCC 52 Taxiway L 130 150 PCO 14 (1.75) AC 178 (7.0) PCC 52 Taxiway L 130 150 PCO 14 (1.75) AC 178 (7.0) PCC 152 Taxiway L 152 (1.5) PCO 178 (1.0) PCC 152 Taxiway L 152 (1.5) PCO 178 (1.0) PCC 178 (1.0) PCC 152 Taxiway L 152 (1.5)	T21B	Taxiway L	378 (1,240)	15 (50)	Fair	70 (2.75)	AC			AC		152 (6.0) 51 (2.0)	Slag (GP) AC	1 202 (174,426)	203 (8.0)	Silty Sand (SM)	II	Silty Sand (SM)	100 (14,475)
Taxiway L 130 15 Poor 44 (1.75) AC 178 (7.0) PCC 5.2 Poor 44 (1.75) AC 178 (7.0) PCC 120 PCC	T22B	Taxiway L	35 (115)	Varies	Fair	70 (2.75)	AC		_		5.2 (750)								98 (14,260)
Taxiway L 171 15 Poor 83 (3.25) AC 178 (7.0) PCC 5.2 Poor 178 (7.0) PCC 5.2 Poor 178 (7.0) PCC 5.2 Poor 178 (7.0) PCC 1750) PCC 1750) PCC 1750 PCC	T23B	Taxiway L	130 (425)	15 (50)	Poor	44 (1.75)	AC				5.2 (750)								103 (14,975)
Flack Ramp 1268 (75) Poor 64 (2.5) AC 178 (7.0) PCC (750) Sand Clay 107 Sand Clay 108 Sand Scool Sand Clay 108 Sand Clay	T24B	Taxiway L	171 (562)	15 (50)	Poor	83 (3.25)	AC		_		5.2 (750)								90 (13,063)
Black Ramp 404 69 Very Good Good	T25B	Taxiway 1	82 (268	23 (75)	Poor	64 (2.5)	AC				5.2 (750)								87 (12,568)
Black Ramp 282 Varies Very good Statistical Construction data and/or measurements recorded in previous investigations. PCC 4.9 152 (6.0) PCC 4.9 152 (6.0) PCC 4.80 PCC PCC 4.80 PCC PCC	A1B	Black Ramp	404 (1,325)	69 (225)	Very good						4.9 (700)	152 (6.0)	Sand Clay (SC)	107 (15,420)				Silty Sand (SM)	107 (15,420)
Brown Ramp Varies Varies Varies Poor 38 (1.5) AC 52 (2.0) AC 203 (8.0) Stabilized 43* Silty Sand Silty Sand	A2B	Black Ramp	282 (925)	Varies	Very good				_		4.9 (700)	152 (6.0)	Sand Clay (SC)	108 (15,637)				Silty Sand (SM)	108 (15,637)
4B Brown Ramp Varies Voir good AC 152 (6.0) PCC 3.3 Lean Clay Lean Clay 5B Brown Ramp 110 12 Very good 152 (6.0) PCC 3.3 (4.80) Lean Clay Values from original construction data and/or measurements recorded in previous investigations. Modulus values used for the structural analysis of the payment features. (CL) (CL)	A3B	Brown Ramp	Varies	Varies	Fair					AC		203 (8.0)	Stabilized Aggregate	43⁴				Silty Sand (SM)	2.8 ₄
SE Brown Ramp 110 12 Very good 152 (6.0) PCC 3.3 Lean Clay	A4B	Brown Ramp	Varies	Varies	Poor	38 (1.5)	AC				3.3 (480)								89 (12,981)
Values from original construction data and/or measurements recorded in previous investigations. Modulus values used for the structural analysis of the pavement features. CBR values from LOW (Low Volume Evaluation Program).	A5B	Brown Ramp Pads	110 (360)	12 (41)	Very good						3.3 (480)								97 (14,039)
Values from original construction data and/or measurements recorded Modulus values used for the structural analysis of the pavement feature CBR values from LOW (Low Volume Evaluation Program).																			(Sheet 5 of 8)
	¹ Valu ² Modi ⁴ CBR	es from original co ulus values used fo values from LOW	nstruction or the struc (Low Volue	data and/c tural analy me Evalua	or measurem sis of the pa tion Progran	nents recordeo avement featur n).	I in previous in res.	vestigati	ons.										

Tab	Table A3 (Continued)	ntinu	(p∈															
		Facility			- 6	Overlay Pavement		<u>a</u>	Pavement			Base			Subbase		gns	Subgrade
егстает	Identification	Length m (ft)	Width m (ft)	General Conditio n PCI	Thickness ¹ mm (in.)	Descriptio n	Flex. Str. ¹ MPa (psi)	Thickness ¹ mm (in.)	Descriptio n	Flex. Str.¹ MPa (psi)	Thickness ¹ [Mm (in.)	Descriptio 1	Modulus² MPa (psi)	Thickness ¹ [mm (in.)	Descriptio 1	Modulus² MPa (psi)) Jescriptio	Modulus² MPa (psi)
Fixed	-Wing Facilit	ies																
A6B	A6B Brown Ramp Var	Varies	Varies	Fair				52 (2.0)			152 (6.0) 51 (2.0)	Slag (GP) AC	293 (42,572)	203 (8.0)	Silty Sand (SM)	137 (19,872)	Silty Sand (SM)	137 (19,872)
A7B	Yellow Ramp	Varies	Varies	Fair	38 (1.5)	AC		52 (2.0)	AC		203 (8.0)	Stabilized Aggregate	382 (55,477)				Silty Sand (SM)	122 (17,655)
A8B	Yellow Ramp	175 (575)	43 (140)	G000	76 (3.0)	AC		152 (6.0)	PCC	3.3 (480)							Lean Clay (CL)	78 (11,294)
A9B	Yellow Ramp	175 (575)	15 (50)	9009	76 (3.0)	AC		178 (7.0)	PCC	5.2 (750)							Clayey Sand (SC)	111 (16,094)
A10B	Yellow Ramp	84 (275)	43 (140)	Fair	38 (1.5)	AC		152 (6.0)	PCC	3.3 (480)							Lean Clay (CL)	70 (10,091)
A11B	Yellow Ramp	Varies	Varies	Good	76 (3.0)	AC		178 (7.0)	PCC	5.2 (750)							Clayey Sand (SC)	101 (14,586
A12B	Yellow Ramp	Varies	Varies	Fair	38 (1.5)	AC		178 (7.0)	PCC	5.2 (750)							Clayey Sand (SC)	111 (16,063)
A13B	Yellow Ramp (Closed)	Varies	Varies	Not Surveyed	25 (1.0)	AC		52 (2.0)	AC		152 (6.0)	Stabilized Aggregate					Silty Sand (SM)	
A14B	Apron 1	Varies	Varies	Very good				254 (10.0)	PCC	5.5 (800)	305 (12.0)	Clayey Sand (SC)	136 (19,775)				Lean Clay (CL)	136 (19,775)
A15B	Green Ramp	Varies	Varies	Poor	25 (1.0)	AC		52 (2.0)	AC		152 (6.0)	Stabilized Aggregate	44 ⁴				Silty Sand (SM)	* *80
																		(Sheet 6 of 8)

Tyalues from original construction data and/or measurements recorded in previous investigations. Modulus values used for the structural analysis of the pavement features.

	Subbase	Thickness Modulus Modulus Modulus Modulus MPa (ps) Description MPa (ps) MPa (ps)		Silty Sand 74 (SM)	Silty Sand 9 ⁴ (SM)	Lean Clay 71 (CL) (10,283)	Silty Sand 74 (SM) (10,723)	Silty Sand 158 (SM) (22,974)	Silty Sand 114 (SM)		8.0) Sand Clay 44 ⁴ Sily Sand 8 ⁴ (SM) (SC)	8.0) Sand Clay 44 ⁴ Silty Sand 10 ⁴ (SC) (SM)		
		Modulus² MPa (psi)		d 52 ⁴	1 48 ⁴		ty 74 (10,723)	ty 158 (22,974)	1 54 ⁴ e		42 ⁴ 203 (8.0)	474 203 (8.0)		1 551 (225,000)
	Base	Thickness¹ Mm (in.) Description		203 (8.0) Silty Sand (SM)	152 (6.0) Stabilized Aggregate		152 (6.0) Sand Clay (SC)	152 (6.0) Sand Clay (SC)	152 (6.0) Stabilized Aggregate		152 (6.0) Graded Crushed Aggregate (GW)	152 (6.0) Graded Crushed Aggregate	(GW)	(GW) 178 (7.0) Graded Crushed Aggregate (GW)
	Pavement	Flex. Str.¹ MPa ion (psi)		AC 2	AC 1	PCC 3.3 (480)	PCC 4.8 1	PCC 4.8 1 (700)	AC 1		AC 1	AC 1		AC 1
	Pav	Thickness ¹ mm (in.)		52 (2.0) A	52 (2.0) A	152 (6.0) PQ	406 (16.0) PO	406 (16.0) PO	52 (2.0) A		51 (2.0) A	51 (2.0) A		51 (2.0) A
	Overlay Pavement			AC	AC				AC		AC	AC		AC
		General Condition Thickness PCI mm (in.)		Very poor 25 (1.0)	ir 25 (1.0)	or	Very good	Excellent	ir 25 (1.0)		od 32 (1.25)	od 32 (1.25)	_	od 32 (1.25)
inued)	lity	h Width m (ft)		312 46 Ver	Varies Varies Fair	76 46 Poor (250) (150)	Varies Varies Ver	Varies Varies Exc	(400) (200) Fair	s	168 23 Good (550) (75)	(350) (40) Good		(1,350) (100) Good
Table A3 (Continued)	Facility	Identification m (Fixed-Wing Facilities	Green Ramp 312 (1,0	Green Ramp Va	Green Ramp 76 (25	South Holding Val	North Holding Val Apron	Apron 2 122 (40	/-Wing Facilitie		Access Taxiway 10, For Rotary-Wing (35 Runway	_	Red Ramp 41. (Hoverlane) (1,3
Tabl		тостзго	Fixed-	A16B	A17B (A18B (A28B (A29B	A30B /	Rotary	R22B	T26B /		A19B

Tab	Table A3 (Concluded)	nclud	ed)															
		Facility			Pa	Overlay Pavement			Pavement			Base			Subbase		igns	Subgrade
T O C + Z F (Length	Width	General Conditio	ss.	Descriptio	Flex. Str.	Thickness	Thickness Descriptio	Flex. Str.	Thickness	Descriptio	Modulus ²	Thickness	Descriptio	Modulus ²	Modulus, Descriptio	Modulus ²
Rotar	Rotary-Wing Facilities (Concluded)	ities (C	onclud	ed)	mm (m.)		(DSI)	mm (m.)		(Isd)	MIII (III.)		Mra (psi)	mm (m.)		Mra (psi)		nra (psi)
A21B	Red Ramp (Hangar Apron)	Varies	Varies	Fair	32 (1.25)	AC		51 (2.0)	AC		178 (7.0)	Graded Crushed Aggregate (GW)	664 (96,321)				Silty Sand (SM)	171 (24,791)
A22B	White Ramp (Hoverlane)	463 (1,520)	30 (100)	Good	32 (1.25)	AC		51 (2.0)	AC		178 (7.0)	Graded Crushed Aggregate (GW)	1 551 (225,000)				Silty Sand (SM)	174 (25,245)
A23B	White Ramp (Pads)	137 (450)	(0E) 6	Excellent				203 (8.0)	P00 0	5.2 (750)							Silty Sand (SM)	126 (18,334)
A24B	White Ramp (Hangar Apron)	Varies	Varies	Good	32 (1.25)	AC		51 (2.0)	AC		178 (7.0)	Graded Crushed Aggregate (GW)	740 (107,394)				Silty Sand (SM)	152 (22,117)
A25B	White Ramp (Hangar Apron)	Varies	Varies	Excellent				203 (8.0)	PCC	5.2 (750)							Silty Sand (SM)	151 (21,862)
A26B	Blue Ramp (Hoverlane)	(1,610)	30 (100)	Doo S	32 (1.25)	AC		51 (2.0)	AC		178 (7.0)	Graded Crushed Aggregate (GW)	400 (58,062)				Silty Sand (SM)	145 (20,963)
A27B	Blue Ramp (Pads)	137 (450)	(30)	Very good				203 (8.0)	PCC	5.2 (750)							Silty Sand (SM)	138 (20,046)
																		(Sheet 8 of 8)
¹ Value ² Mod⊍	Values from original construction data and/or measurements recorded in previous investigations. Modulus values used for the structural analysis of the pavement features.	nstruction or the struc	data and/o tural analy	r measurem sis of the par	ents recorded vement featur	in previous ir es.	nvestig	ations.										

Table A4			
Traffic Data (January thru December 2000)			
Aircraft	Weight kg (lb)	12-month Period	20-Year Departures
C-17	263 320 (580,000)	161	3,220
C-130	70 370 (155,000)	998	20,000
C-141	146 642 (323,000)	325	6,500
C-5A	349 126 (769,000)	28	560
KC-10	267 860 (590,000)	2	40
KC-135	136 926 (301,600)	10	200
C-9	49 032 (108,000)	100	2,000
B-707	141 648 (312,000)	3	60
B-727	95 113 (209,500)	43	860
B-737	68 100 (150,000)	41	820
B-747	362 292 (798,000)	3	60
B-757	116 224 (256,000)	20	400
B-767	185 686 (409,000)	11	220
DC-10	264 682 (583,000)	6	120
L-1011	226 092 (498,000)	40	800
MD-80	54 934 (121,000)	3	60

Appendix B Tests and Results

Tests Conducted

The pavements were evaluated based on the results from nondestructive testing utilizing a heavy weight deflectometer (HWD). The test procedures and results are discussed below.

Nondestructive Tests

Test equipment

Nondestructive tests (NDT) were performed on the pavements with the Dynatest model 8081 (HWD). The HWD is an impact load device that applies a single-impulse transient load of approximately 25- to 30-millisecond duration. With this trailer-mounted device, a dynamic force is applied to the pavement surface by dropping a weight onto a set of rubber cushions which results in an impulse loading on an underlying circular plate 300 mm (11.8 in.) in diameter in contact with the pavement. The applied force and the pavement deflections, respectively, are measured with load cells and velocity transducers. The drop height of the weights can be varied from 0 to 399 mm (15.7 in.) to produce a force from 0 to approximately 222 kN (50,000 lb). The system is controlled with a laptop computer that also records the output data. Velocities were measured and deflections computed at the center of the load plate (D1) and at distances of 305 (12), 610 (24), 914 (36), 1219 (48), 1524 (60), and 1828 mm (72 in.) (D2 - D7) from the center of the load plate.

Test procedure

On runways and taxiways, deflection basin measurements were made at 30-m (100-ft) intervals on alternate sides of the centerline along the main gear wheel paths. The tests were performed on 3- to 4-m (10- to 12-ft) offsets alternating left and right of the centerline. The parking aprons were tested in a grid pattern of approximately 30-m (100-ft) intervals or at locations that were

selected to ensure that adequate NDT were performed per feature for evaluation purposes. Lines along which the NDT were conducted are indicated in Figure B1. At each test location, pavement deflection measurements were recorded at force levels of approximately 67, 122, 157, or 222 kN (15,000, 25,000, 35,000, or 50,000 lb). Impulse stiffness modulus (ISM) values were then calculated based on the slope of the plot of impulse load versus deflection at the first sensor (D1), for the maximum force level.

NDT Analysis

The NDT results or ISM data for each facility were grouped according to different pavement features. Figures B2 through B29 graphically show the ISM test results. A representative basin for each feature was determined using the computerized Layered Elastic Evaluation Program (LEEP). Table B1 shows the representative basins for each feature as determined from the NDT.

Representative basins were used to determine section modulus values of the various layers within the pavement structure in each feature. Deflection basins were input to a multi-layered, linear elastic backcalculation program to determine the surface, base, and subgrade modulus values. The program determines a set of modulus values that provide the best fit between a measured (NDT) deflection basin and a computed (theoretical) deflection basin. Table B2 presents a summary of the backcalculated modulus values based on the representative basins for each pavement section.

Where mean ISM values (as shown in Table B1) were less than 70 MN/m (400 kips/in.), the Low Volume Airfield Pavement Procedure (Bush 1986) computer program (LOW) was used to evaluate the pavements. Features T13B, T16B, A4B, and A12B were in this category. ISM and layer thicknesses were input into LOW to determine the equivalent base and subgrade California Bearing Ratio (CBR). Layer thicknesses and respective CBR values were then input into the computer program APE (Computer-Aided Airfield Pavement Evaluation) to compute the load-carrying capacity (PCN) of the pavements and the overlay thickness requirements. Table B3 shows the CBR values determined from LOW.

Modulus values for AC surface layers can be determined using three methods: (a) use the surface temperature at the time of testing and the previous 5-day mean air temperature, (b) backcalculate the modulus values using the FWD deflection basins, or (c) determine the design modulus from past temperature data. All three methods of determining the AC modulus values are described in UFC 3-260-03 (Headquarters, Departments of the Army, the Air Force, and the Navy April 2001). All pavements have been evaluated for a design life of 20 years. The modulus of an AC layer is temperature dependent; therefore, seasonal variation is considered by using a design modulus based on historical temperature data. From the climatological table (Table A1), an average daily maximum temperature of 33°C (91°F) and an average daily mean of 27°C (81°F) for July (hottest month) were used in determining the design AC modulus. For a

B2 Appendix B Tests and Results

loading frequency of 2 Hz for taxiways and aprons, the design AC modulus is 822 MPa (119,290 psi) for a loading frequency of 10 Hz for the runway, the design AC modulus is 1460 MPa (211,811 psi). The design AC modulus along with the backcalculated values for the base and subgrade layers were used to determine the structural capacity of the AC pavement features.

Modulus values for PCC pavements can be backcalculated using the FWD deflection basins or a design modulus for the PCC can be used. In the evaluation of a rigid pavement, the design modulus should be used for the PCC layer along with the backcalculated values for the subgrade layers. The backcalculated PCC modulus values shown in Table B2 are within the default range of 17 237 to 48 263 MPa (2,500,000 to 7,000,000 psi) recommended in UFC 3-260-03 (Headquarters, Departments of the Army, Navy, and the Air Force, and the Navy 2001). This manual also recommends a modulus of 34 474 MPa (5,000,000 psi) for a PCC layer in good condition.

The ability of the joints in the PCC slabs to transfer load is measured with the HWD device. The ratio of deflections measured on each side of the joint (deflection of unloaded side/deflection of loaded side) is related to joint efficiency or load transfer. Joint tests were conducted at select locations on the PCC pavements. Table B4 shows the summaries of joint ratio test on select PCC pavements.

Appendix B Tests and Results B3

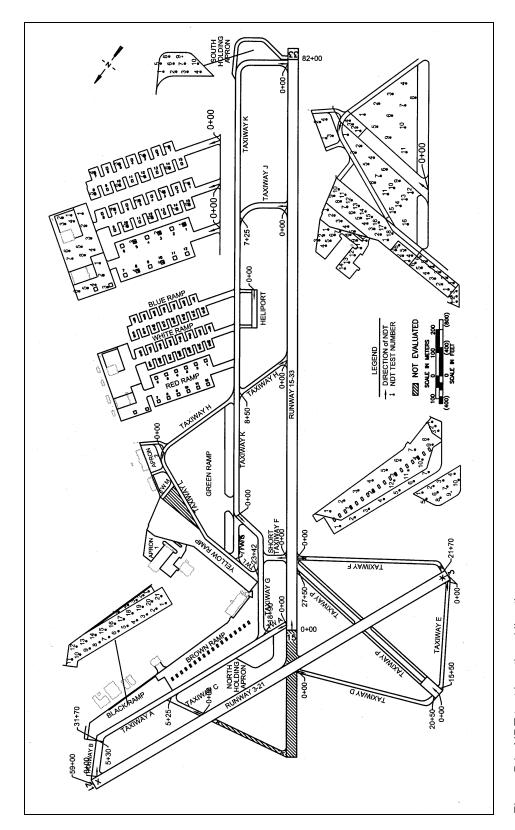


Figure B1. NDT test locations/direction

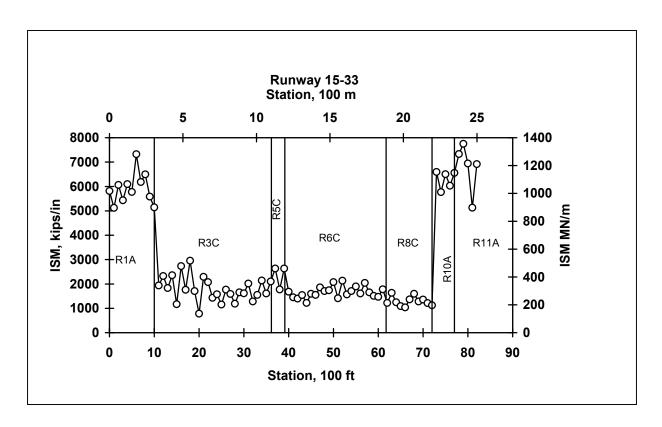


Figure B2. ISM profile, Runway 15-33, Features R1A thru R11A

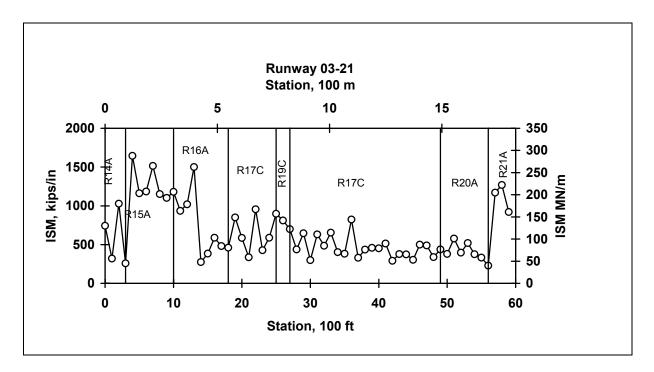


Figure B3. ISM profile, Runway 03-21, Features R14A thru R21A

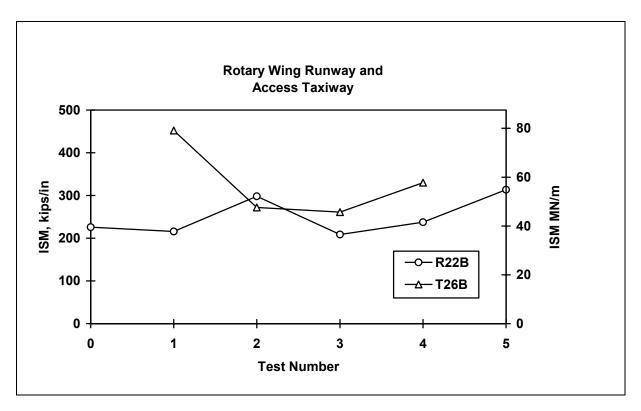


Figure B4. ISM profile, Rotary-Wing Runway and Access Taxiway, Features R22B and T26B

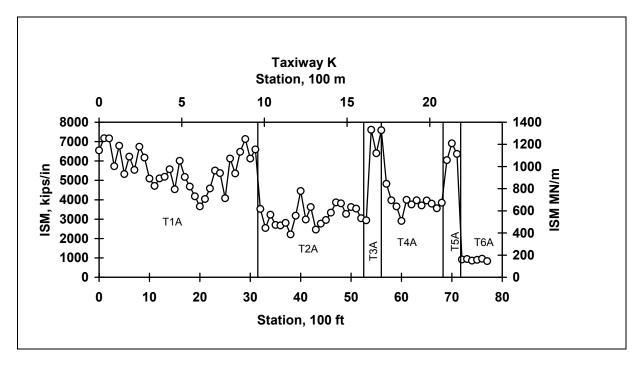


Figure B5. ISM profile, Taxiway K, Features T1A, T2A, T3A, T4A, T5A, and T6A

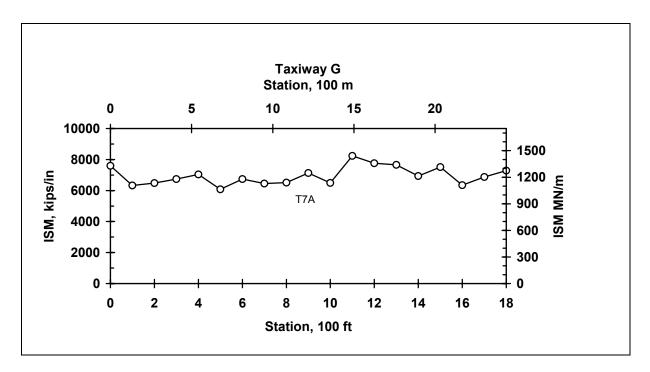


Figure B6. ISM profile, Taxiway G, Feature T7A

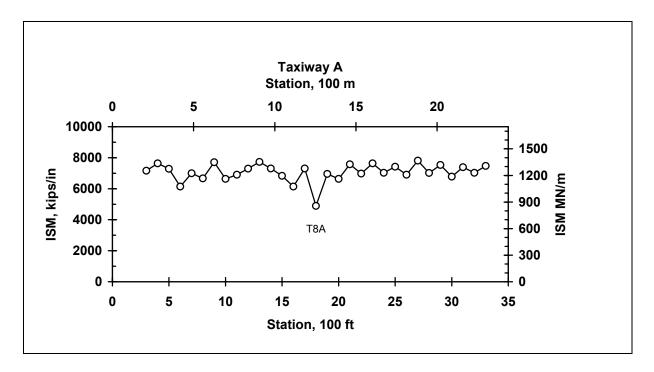


Figure B7. ISM profile, Taxiway A, Feature T8A

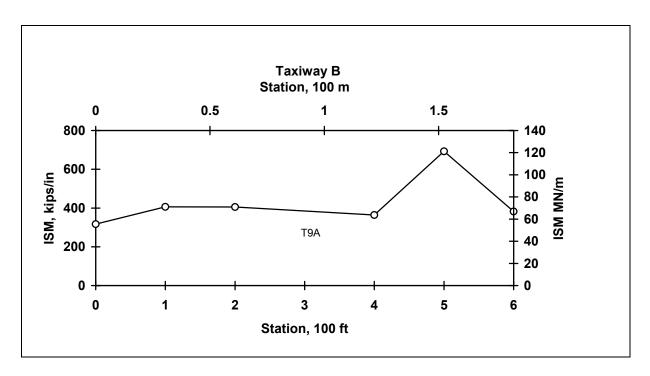


Figure B8. ISM profile, Taxiway B, Feature T9A

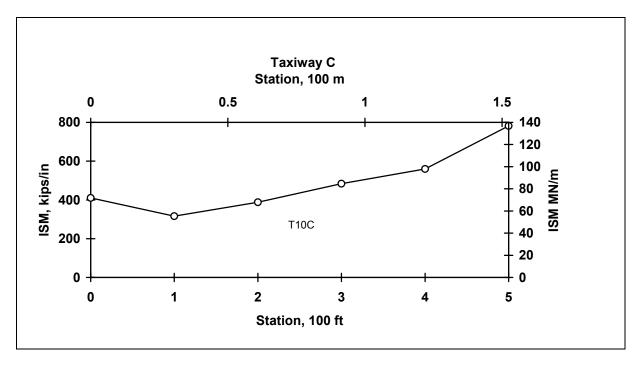


Figure B9. ISM profile, Taxiway C, Feature T10C

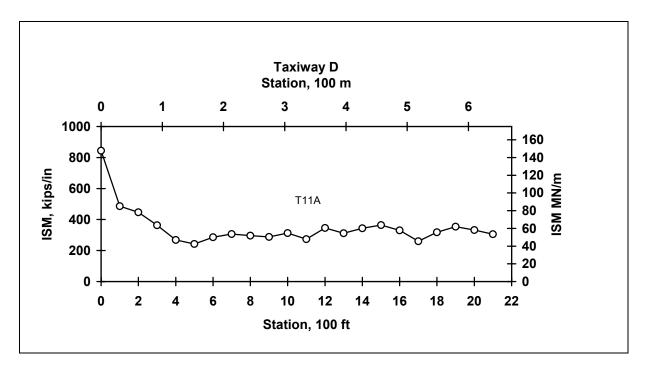


Figure B10. ISM profile, Taxiway D, Feature T11A

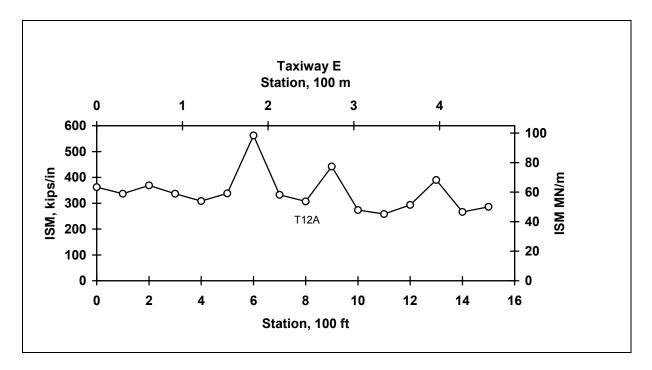


Figure B11. ISM profile, Taxiway E, Feature T12A

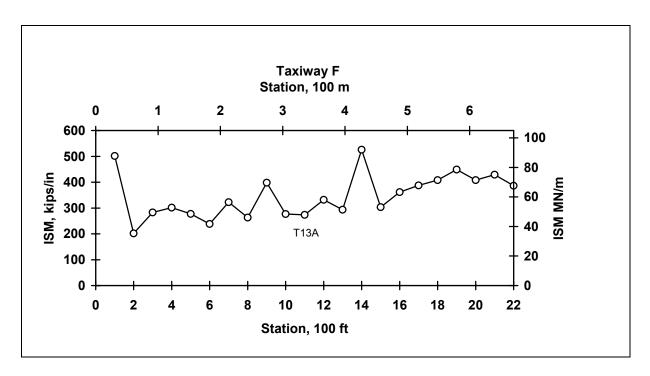


Figure B12. ISM profile, Taxiway F, Feature T13A

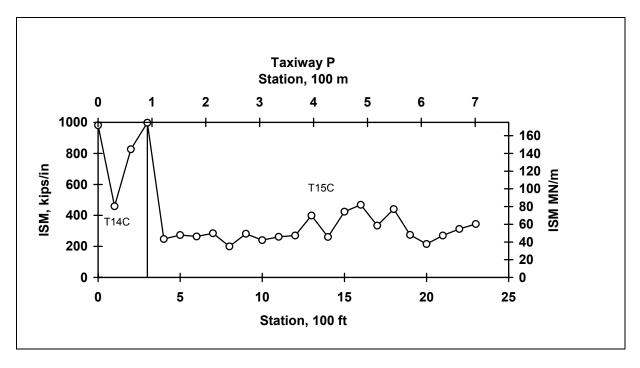


Figure B13. ISM profile, Taxiway P, Features T14C and T15C

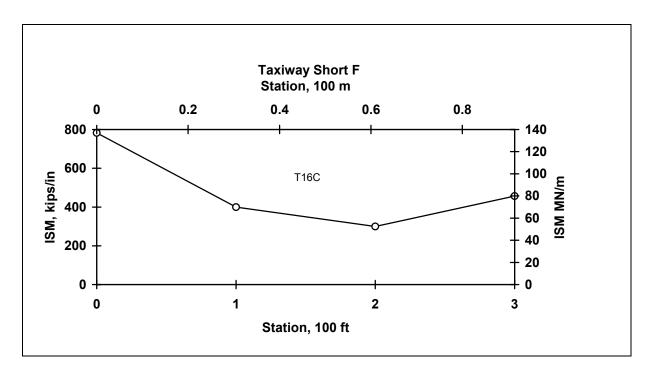


Figure B14. ISM profile, Taxiway Short F, Feature T16C

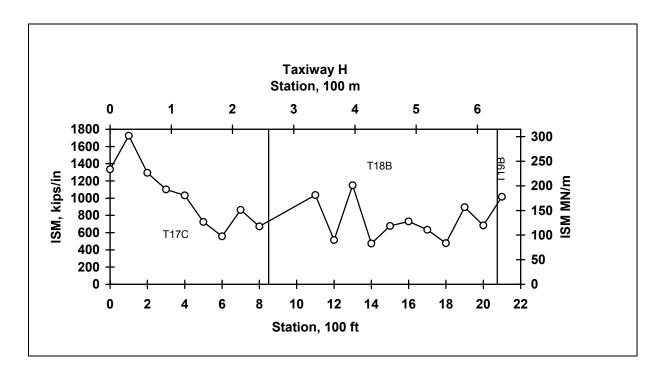


Figure B15. ISM profile, Taxiway H, Features T17C, T18B, and T19B

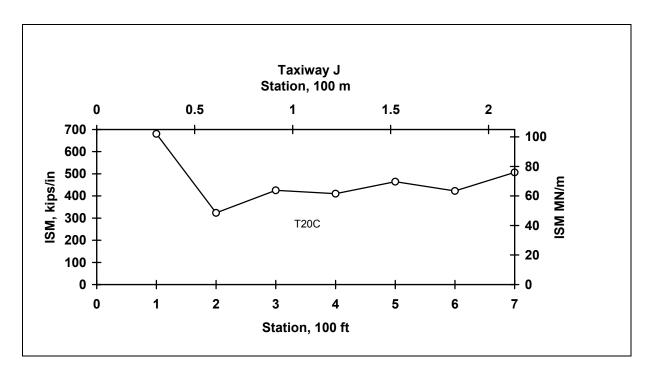


Figure B16. ISM profile, Taxiway J, Feature T20C

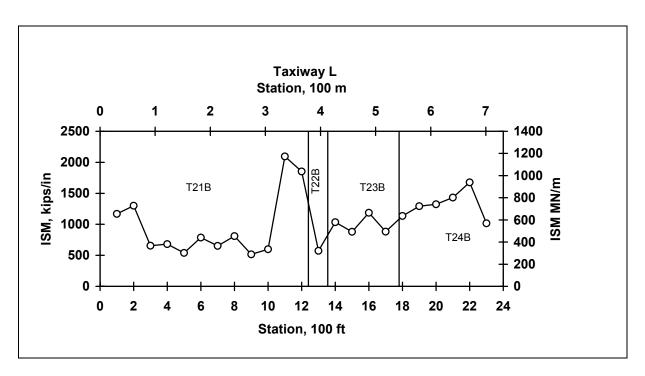


Figure B17. ISM profile, Taxiway L, Features T21B, T22B, T23B, and T24B

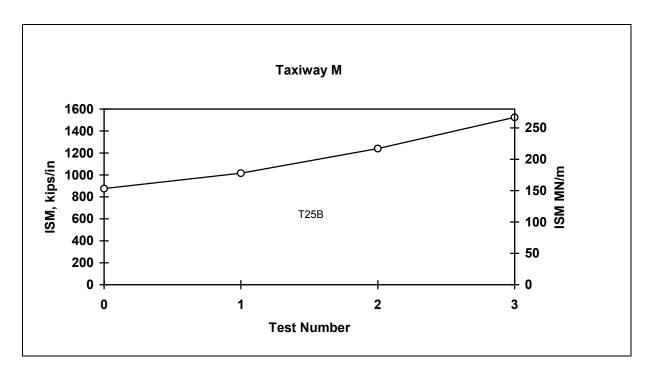


Figure B18. ISM profile, Taxiway M, Feature T25B

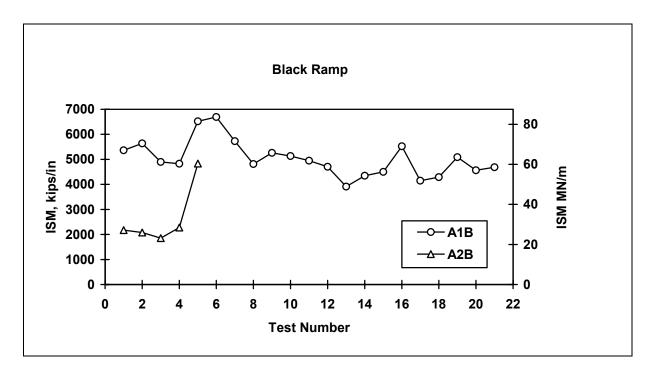


Figure B19. ISM profile, Black Ramp, Features A1B and A2B

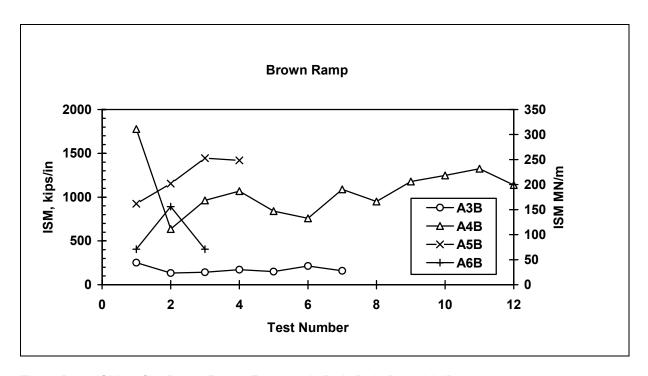


Figure B20. ISM profile, Brown Ramp, Features A3B, A4B, A5B, and A6B

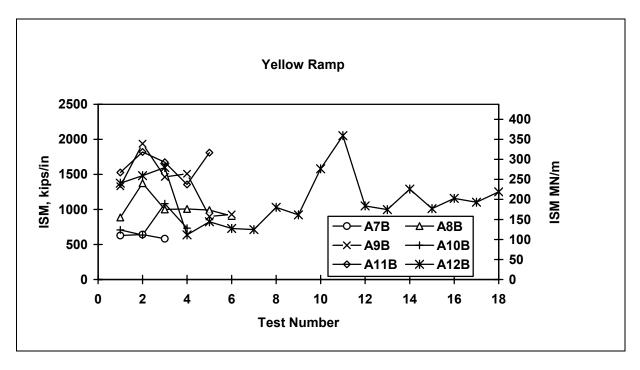


Figure B21. ISM profile, Taxiway Yellow Ramp, Features A7B, A8B, A9B, A10B, A11B, and A12B

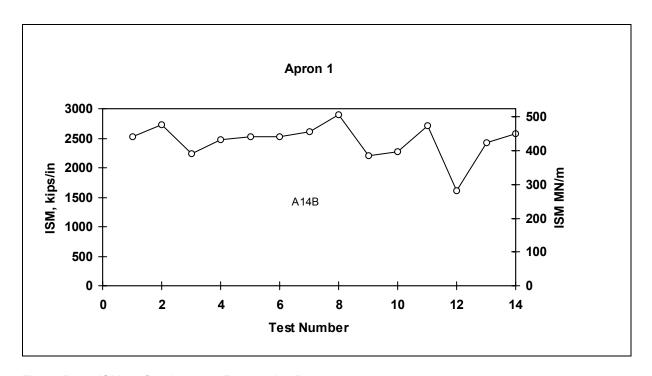


Figure B22. ISM profile, Apron 1, Feature A14B

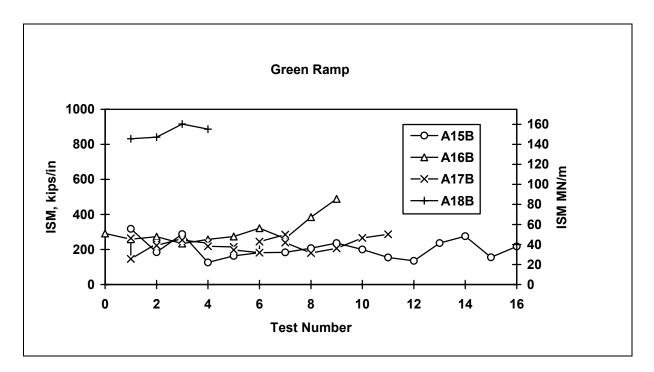


Figure B23. ISM profile, Green Ramp, Features A15B, A16B, A17B, and A18B

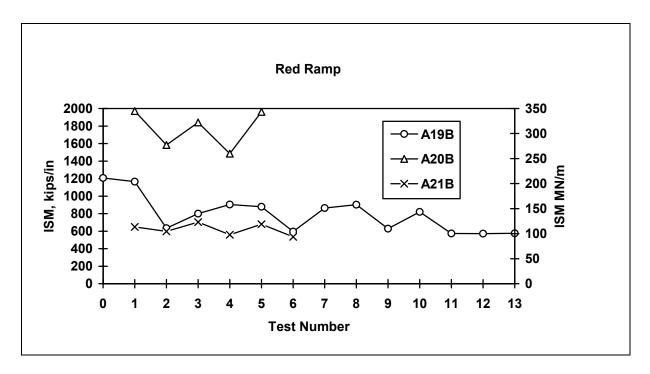


Figure B24. ISM profile, Red Ramp, Features A19B, A20B, and A21B

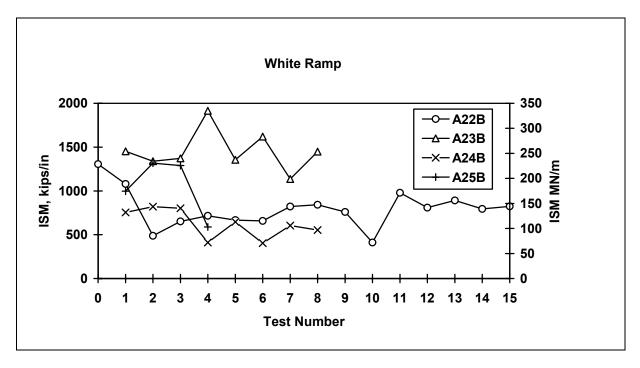


Figure B25. ISM profile, White Ramp, Features A22B, A23B, A24B, and A25B

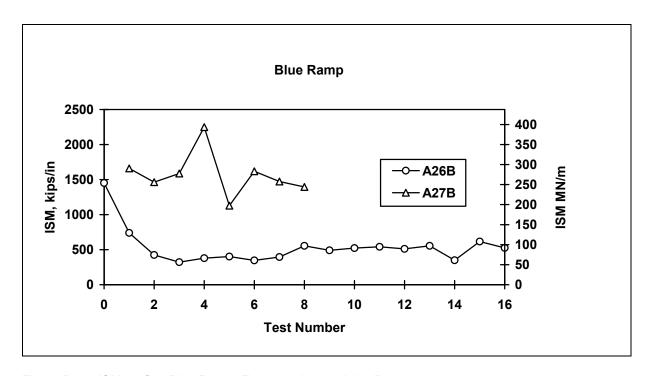


Figure B26. ISM profile, Blue Ramp, Features A26 and A27B

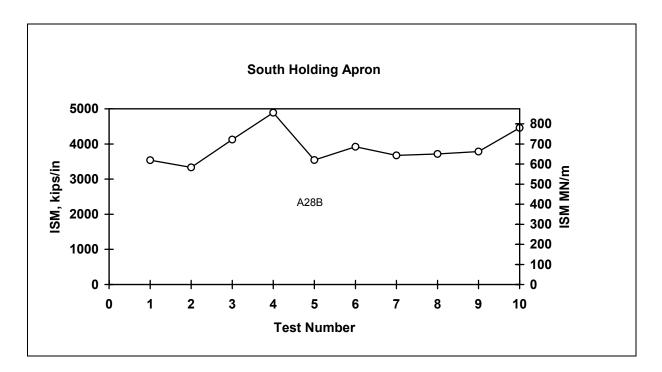


Figure B27. ISM profile, South Holding Apron, Feature A28B

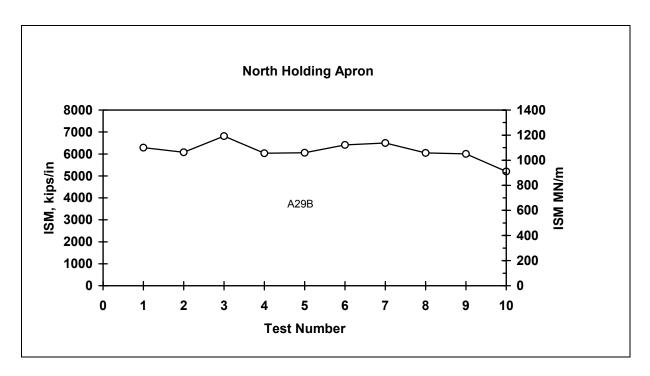


Figure B28. ISM profile, North Holding Apron, Feature A29B

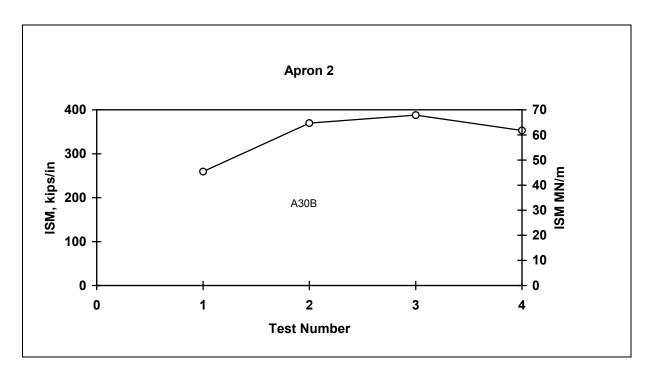


Figure B29. ISM profile, Apron 2, Feature A30B

	ISM Load Deflection, µm (mils)								
	MN/m	kN							
Feature	(kips/in.)	(lb)	D1	D2	D3	D4	D5	D6	D7
			R	unway 15	33				
R1A	1 067	236	221	191	175	160	145	130	117
	(6,097)	(53,049)	(8.7)	(7.5)	(6.9)	(6.3)	(5.7)	(5.1)	(4.6)
R3C	309	222	718	533	404	307	241	191	150
	(1,765)	(49,947)	(28.3)	(21.0)	(15.9)	(12.1)	(9.5)	(7.5)	(5.9)
R5A	461	223	483	338	279	236	198	165	137
D00	(2,635)	(50,062)	(19.0)	(13.3)	(11.0)	(9.3)	(7.8)	(6.5)	(5.4)
R6C	311	217	699	500	378	295	229	183	150
R8C	(1,777) 220	(48,874)	(27.5)	(19.7)	(14.9) 516	(11.6) 368	(9.0)	(7.2)	(5.9) 157
R8C	(1,225)	215 (48,378)	1 003 (39.5)	742 (29.2)	(20.3)	(14.5)	264 (10.4)	201 (7.9)	(6.2)
D104	1 138	231	 	178	† · · · · ·	147	135	122	107
R10A	(6,500)	(52,000)	(8.0)	(7.0)	163 (6.4)	(5.8)	(5.3)	(4.8)	(4.2)
R11A	1 215	(52,000)	185	160	150	137	124	114	104
KIIA	(6,941)	(50,666)	(7.3)	(6.3)	(5.9)	(5.4)	(4.9)	(4.5)	(4.1)
	(0,011)	(00,000)	<u> </u>	unway 03-		(0.1)	(1.0)	(1.0)	1 (1.1)
D444	100	100				200	040	400	144
R14A	130 (743)	130 (29,270)	1 000 (39.4)	742 (29.2)	526 (20.7)	366 (14.4)	(9.8)	168 (6.6)	114 (4.5)
R15A	207	132	638	333	213	150	109	86	69
KIJA	(1,185)	(29,742)	(25.1)	(13.1)	(8.4)	(5.9)	(4.3)	(3.4)	(2.7)
R16C	103	129	1 247	693	427	277	178	114	84
11100	(589)	(28,896)	(49.1)	(27.3)	(16.8)	(10.9)	(7.0)	(4.5)	(3.3)
R17C	88	120	1 374	876	495	284	188	135	107
	(500)	(27,053)	(54.1)	(34.5)	(19.5)	(11.2)	(7.4)	(5.3)	(4.2)
R19C	142	127	896	678	467	310	180	127	104
	(812)	(28,662)	(35.3)	(26.7)	(18.4)	(12.2)	(7.1)	(5.0)	(4.1)
R20A	91	119	1 308	950	577	302	213	157	124
	(521)	(26,807)	(51.5)	(37.4)	(22.7)	(11.9)	(8.4)	(6.2)	(4.9)
R21A	205	132	645	574	467	366	282	211	155
	1,170)	(29,730)	(25.4)	(22.6)	(18.4)	(14.4)	(11.1)	(8.3)	(6.1)
			Rota	ry-Wing R	unway				
R22B	42	65	1 572	894	371	140	76	66	61
	(238)	(14,702)	(61.9)	(35.2)	(14.6)	(5.5)	(3.0)	(2.6)	(2.3)
				Taxiway k	ζ				
T1A	938	229	244	236	224	208	191	175	155
	(5,360)	(51,456)	(9.6)	(9.3)	(8.8)	(8.2)	(7.5)	(6.9)	(6.1)
T2A	533	214	401	371	338	300	257	216	175
	(3,047)	(48,143)	(15.8)	(14.6)	(13.3)	(11.8)	(10.1)	(8.5)	(6.9)
T3A	1 333	227	170	152	147	137	127	114	104
	(7,615)	(51,019)	(6.7)	(6.0)	(5.8)	(5.4)	(5.0)	(4.5)	(4.1)
T4A	673	226	335	320	297	269	241	216	188
	(3,847)	(50,785)	(13.2)	(12.6)	(11.7)	(10.6)	(9.5)	(8.5)	(7.4)
T5A	1 210	228	188	173	163	150	135	119	107
	(6,913)	(51,154)	(7.4)	(6.8)	(6.4)	(5.9)	(5.3)	(4.7)	(4.2)
T6A	158	158	1 001	620	348	224	160	127	109
	(900)	(35,479)	(39.4)	(24.4)	(13.7)	(8.8)	(6.3)	(5.0)	(4.3)
				Taxiway C		1	1	1	
T7A	1 213 (6,930)	225 (50,590)	185 (7.3)	170 (6.7)	160 (6.3)	152 (6.0)	137 (5.4)	127 (5.0)	114 (4.5)

	ISM	Load			Defl	ection, µm	n (mils)		
	MN/m	kN				1	1		
eature	(kips/in.)	(lb)	D1	D2	D3	D4	D5	D6	D7
		•		Taxiway G	;		•		
Г8A	1 208	230	191	168	155	145	132	119	109
	(6,904)	(51,786)	(7.5)	(6.6)	(6.1)	(5.7)	(5.2)	(4.7)	(4.3)
				Taxiway E	3				
Г9А	71	64	907	462	231	127	81	58	51
	(405)	(14,476)	(35.7)	(18.2)	(9.1)	(5.0)	(3.2)	(2.3)	(2.0)
				Taxiway C	;				
T10C	85	53	625	386	196	102	61	46	36
	(484)	(11,910)	(24.6)	(15.2)	(7.7)	(4.0)	(2.4)	(1.8)	(1.4)
				Taxiway D)				
T11A	60	66	1 087	544	269	157	107	76	61
	(345)	(14,786)	(42.8)	(21.4)	(10.6)	(6.2)	(4.2)	(3.0)	(2.4)
				Taxiway E					
T12A	54	65	1 209	475	261	152	102	71	61
	(307)	(14,690)	(47.6)	(18.7)	(10.3)	(6.0)	(4.0)	(2.8)	(2.4)
				Taxiway F					
T13A	58	65	1 120	630	279	130	69	61	48
	(332)	(14,623)	(44.1)	(24.8)	(11.0)	(5.1)	(2.7)	(2.4)	(1.9)
				Taxiway F)				
T14C	145	163	1 123	1 021	843	660	518	389	287
	(827)	(36,559)	(44.2)	(40.2)	(33.2)	(26.6)	(20.4)	(15.3)	(11.3)
T15C	49	64	1 303	655	264	165	114	86	71
	(281)	(14,432)	(51.3)	(25.8)	(10.4)	(6.5)	(4.5)	(3.4)	(2.8)
			1	ort Taxiwa	-	1			<u></u>
T16C	70	68	965	566	264	132	81	64	56
	(400)	(15,195)	(38.0)	(22.3)	(10.4)	(5.2)	(3.2)	(2.5)	(2.2)
				Taxiway F	1	T	T	T	T
T17C	181	163	899	607	414	300	221	178	147
T40D	(1,032)	(36,559)	(35.4)	(23.9)	(16.3)	(11.8)	(8.7)	(7.0)	(5.8)
T18B	121 (698)	160 (35,895)	1 306 (51.4)	935 (36.8)	612 (24.1)	417 (16.4)	292 (11.5)	216 (8.5)	168 (6.6)
T19B	178	160	897	676	490	356	264	206	173
1100	(1,017)	(35,884)	(35.3)	(26.6)	(19.3)	(14.0)	(10.4)	(8.1)	(6.8)
	1 () /			Taxiway J			1 \ /	1 \ /	1 \ /
T20C	89	68	772	508	191	127	94	74	61
	(506)	(15,394)	(30.4)	(20.0)	(7.5)	(5.0)	(3.7)	(2.9)	(2.4)
				Taxiway L					
Г21В	138	158	1 146	810	572	409	261	206	168
_	(788)	(35,538)	(45.1)	(31.9)	(22.5)	(16.1)	(10.3)	(8.1)	(6.6)
Г22В	181	162	894	483	442	373	310	249	201
	(1,034)	(36,380)	(35.2)	(19.0)	(17.4)	(14.7)	(12.2)	(9.8)	(7.9)
Г23В	146	159	1 026	536	465	381	305	236	185
	(883)	(35,661)	(40.4)	(21.1)	(18.3)	(15.0)	(12.0)	(9.3)	(7.3)
Г24В	232	161	693	582	485	396	315	251	198
	(1,323)	(36,126)	(27.3)	(22.9)	(19.1)	(15.6)	(12.4)	(9.9)	(7.8)

B20 Appendix B Tests and Results

	ISM	Load			Defl	ection, µm	n (mils)		
	MN/m	kN					T T		
Feature	(kips/in.)	(lb)	D1	D2	D3	D4	D5	D6	D7
				Taxiway N					
T25B	217	163	752	541	480	409	333	269	216
	(1,240)	(36,722)	(29.6)	(21.3)	(18.9)	(16.1)	(13.1)	(10.6)	(8.5
		Ro	tary-Wing F	Runway A	cess Taxi	way			
T26B	58	67	1 158	732	391	211	130	89	76
	(330)	(15,052)	(45.6)	(28.8)	(15.4)	(8.3)	(5.1)	(3.5)	(3.0
			В	Black Ram	p		-		
A1B	891	229	257	239	226	211	193	175	157
	(5,091)	(51,417)	(10.1)	(9.4)	(8.9)	(8.3)	(7.6)	(6.9)	(6.2
A2B	380	211	554	528	465	404	333	264	203
	(2,172)	(47,341)	(21.8)	(20.8)	(18.3)	(15.9)	(13.1)	(10.4)	(8.0
	1			rown Ram	qı				
A3B	30	46	1 514	721	251	109	69	53	43
102	(173)	(10,285)	(59.6)	(28.4)	(9.9)	(4.3)	(2.7)	(2.1)	(1.7
A4B	190	156	820	744	605	465	340	234	170
	(1,088)	(35,157)	(32.3)	(29.3)	(23.8)	(18.3)	(13.4)	(9.2)	(6.7
A5B	253	223	881	848	706	561	432	323	241
	(1,445)	(50,125)	(34.7)	(33.4)	(27.8)	(22.1)	(17.0)	(12.7)	(9.5
A6B	71	66	925	396	193	107	66	56	41
	(405)	(14,746)	(36.4)	(15.6)	(7.6)	(4.2)	(2.6)	(2.2)	(1.6)
			Y	ellow Ram	ıp				
A7B	102	66	650	389	218	132	86	64	56
	(583)	(14,913)	(25.6)	(15.3)	(8.6)	(5.2)	(3.4)	(2.5)	(2.2
A8B	175	156	892	732	612	483	373	284	216
	(999)	(35,081)	(35.1)	(28.8)	(24.1)	(19.0)	(14.7)	(11.2)	(8.5)
A9B	233	163	699	462	396	325	262	206	160
	(1,332)	(36,623)	(27.5)	(18.2)	(15.6)	(12.8)	(10.3)	(8.1)	(6.3)
A10B	124	152	1 227	767	655	531	424	323	249
	(708)	(34,176)	(48.3)	(29.0)	(25.8)	(20.9)	(16.7)	(12.7)	(9.8)
A11B	293	171	582	523	450	373	397	234	183
	(1,674)	(38,335)	(22.9)	(20.6)	(17.7)	(14.7)	(11.7)	(9.2)	(7.2)
A12B	203	162	795	488	445	353	277	213	170
	(1,161)	(36,325)	(31.3)	(19.2)	(17.5)	(13.9)	(10.9)	(8.4)	(6.7)
			1	Apron 1		1	1	1	
A14B	434	219	503	460	401	340	277	218	173
	(2,481)	(49,132)	(19.8)	(18.1)	(15.8)	(13.4)	(10.9)	(8.6)	(6.8)
				Taxiway k	<u> </u>	1	1	1	
A15B	32	48	1 491	602	229	137	91	69	58
	(184)	(10,801)	(58.7)	(23.7)	(9.0)	(5.4)	(3.6)	(2.7)	(2.3
A16B	51	47	919	422	170	91	61	48	43
	(291)	(10,539)	(36.2)	(16.6)	(6.7)	(3.6)	(2.4)	(1.9)	(1.7
A17B	32	48	1 529	721	264	165	127	91	81
A 40D	(180)	(10,861)	(60.2)	(28.4)	(10.4)	(6.5)	(5.0)	(3.6)	(3.2
A18B	147	126	851	729	582	452	338	249	183
	(841)	(28,165)	(33.5)	(28.7)	(22.9)	(17.8)	(13.3)	(9.8)	(7.2
	1 .		1	Red Ramp	1		1	1	1
A19B	151	157	1 039	574	310	196	152	124	104
	(864)	(35,328)	(40.9)	(22.6)	(12.2)	(7.7)	(6.0)	(4.9)	(4.1

Table B1	(Concluded	d)							
	ISM	Load			Defl	ection, µm	ı (mils)		
	MN/m	kN							
Feature	(kips/in.)	(lb)	D1	D2	D3	D4	D5	D6	D7
			Red R	amp (Con	tinued)				
A20B	322	218	676	559	437	335	257	196	155
	(1,841)	(48,981)	(26.6)	(22.0)	(17.2)	(13.2)	(10.1)	(7.7)	(6.1)
A21B	119	123	1 036	546	279	170	119	91	79
	(680)	(27,724)	(40.8)	(21.5)	(11.0)	(6.7)	(4.7)	(3.6)	(3.1)
			V	Vhite Ram	р				
A22B	172	157	917	559	330	224	165	132	107
	(980)	(35,356)	(36.1)	(22.0)	(13.0)	(8.8)	(6.5)	(5.2)	(4.2)
A23B	237	215	904	747	579	442	328	241	178
	(1,355)	(48,250)	(35.6)	(29.4)	(22.8)	(17.4)	(12.9)	(9.5)	(7.0)
A24B	106	121	1 140	597	302	191	137	107	86
	(605)	(27,184)	(44.9)	(23.5)	(11.9)	(7.5)	(5.4)	(4.2)	(3.4)
A25B	174	212	1 212	582	450	368	284	218	173
	(997)	(47,567)	(47.7)	(22.9)	(17.7)	(14.5)	(11.2)	(8.6)	(6.8)
				Blue Ram)				
A26B	90	118	1 318	645	290	170	135	109	91
	(512)	(26,580)	(51.9)	(25.4)	(11.4)	(6.7)	(5.3)	(4.3)	(3.6)
A27B	278	216	777	660	523	404	302	224	163
	(1,587)	(48,560)	(30.6)	(26.0)	(20.6)	(15.9)	(11.9)	(8.8)	(6.4)
			South	Holding A	Apron				
A28B	662	224	338	325	307	287	264	239	211
	(3,783)	(50,320)	(13.3)	(12.8)	(12.1)	(11.3)	(10.4)	(9.4)	(8.3)
			North	n Holding	Apron			-	
A29B	1 100	226	206	196	180	165	147	132	119
	(6,285)	(50,912)	(8.1)	(7.7)	(7.1)	(6.5)	(5.8)	(5.2)	(4.7)
				Apron 2					
A30B	62	49	795	363	150	94	69	53	46
	(353)	(11,048)	(31.3)	(14.3)	(5.9)	(3.7)	(2.7)	(2.1)	(1.8)
								(5	Sheet 4 of 4)

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Feature	Surface Modulus MPa (psi ¹)	Base Modulus MPa (psi ¹)	Subbase Modulus MPa (psi ¹)	Subgrade Modulus MPa (psi ¹)
		PCC Pavements		
R1A	47 115 (6,834,150)	178 (25,835) ²		178 (25,835) ²
R10A	66 448 (9,635,585)	196 (28,387) ²		196 (28,387) ²
R11A	61 425 (8,909,872)	180 (26,176) ²		180 (26,176) ²
R14A	1 838 (207,366) ³	34 470 (5,000,000) ⁴		84 (12,197)
R21A	1 700 (246,474) ³	44 817 (6,500,854)		89 (12,934)
T1A	59 108 (8,573,851)	100 (14,440) ²		100 (14,440) ²
T2A	41 496 (6,019,165)	100 (40,000) ⁴	119 (17,190) ⁵	119 (17,190) ⁵
ТЗА	71 459 (10,365,326)	171 (24,780) ²		171 (24,780) ²
T4A	85 946 (12,466,848)	310 (45,000) ⁴	102 (14,825) ⁵	102 (14,825) ⁵
T5A	58 861 (8,538,064)	171 (24,800) ²		171 (24,800) ²
T7A	67 259 (9,756,060)	151 (21,939) ²		151 (21,939) ²
T8A	63 587 (9,223,513)	170 (24,693) ²		170 (24,693) ²
T14C	35 061 (5,085,778)			59 (8,588)
T19B	2 547 (369,421) ³	21 594 (3,132,248)		112 (16,310)
T22B	3 112 (451,365) ³	51 311 (7,442,898)		98 (14,260)
T23B	2 625 (380,758) ³	19 581 (2,840,264)		103 (14,975)
T24B	1 812 (262,772)	41 076 (5,958,229)		90 (13,063)
T25B	2 722 (394,777) ³	44 573 (6,465,516)		87 (12,568)
A1B	71 080 (10,310,344)	106 (15,420) ²		106 (15,420) ²
A2B	48 552 (7,042,635)	108 (15,637) ²		108 (15,637) ²
A4B	766 (111,177) ³	36 044 (5,228,364)		89 (12,981)
A5B	48 552 (9,232,956)			97 (14,039)
A8B	928 (134,606)	41 348 (5,997,610)		78 (11,294)

¹ Backcalculated modulus values using WESDEF.

Appendix B Tests and Results B23

² Base and subgrade were combined.

³ AC modulus based on temperature at the time of testing.

Layer modulus fixed.

⁵ Subbase and subgrade were combined.

Table B2 (C	Continued)			
Feature	Surface Modulus MPa (psi¹)	Base Modulus MPa (psi ¹)	Subbase Modulus MPa (psi ¹)	Subgrade Modulus MPa (psi ¹)
	PC	CC Pavements		
A9B	590 (85,519)	60 011 (8,704,751)		111 (16,094)
A10B	796 (115,503) ³	31 921 (4,630,261)		70 (10,091)
A11B	3 258 (472,654) ³	52 927 (7,677,209)		101 (14,586)
A12B	2 809 (407,391) ³	29 893 (4,336,139)		111 (16,063)
A14B	37 708 (5,469,751)	136 (19,775) ²		136 (19,775) ²
A18B	29 011 (4,208,154)			71 (10,283)
A20B	28 618 (4,151,174)			161 (23,376)
A23B	18 396 (2,668,404)			126 (18,334)
A25B	12 843 (1,862,989)			150 (21,862)
A27B	23 273 (3,375,917)			138 (20,046)
A28B	54 770 (7,944,536)	74 (10,723) ²		74 (10,723) ²
A29B	70 266 (10,192,406)	158 (22,974) ²		158 (22,974) ²
	A	C Pavements	•	•
R3C	4 279 (620,700)	977 (141,671)	157 (22,777) ⁵	157 (22,777) ⁵
R5C	5 612 (814,062)	1 700 (246,567)	9 940 (1,441,796)	158 (22,938)
R6C	3 529 (511,965)	2 189 (317,480)	159 (23,076) ⁵	159 (23,076) ⁵
R8C	3 311 (480,282)	489 (70,983)	141 (20,425) ⁵	141 (20,425) ⁵
R15A	1 666 (241,601)	625 (90,683)		189 (27,448)
R16A	1 387 (201,181)	172 (24,992)		122 (17,698)
R17C	2 770 (401,790)	155 (22,507)		103 (14,995)
R19C	2 049 (297,154)	930 (134,876)	113 (16,445) ⁵	113 (16,445) ⁵
R20C	5 433 (788,085)	92 (13,395)		94 (13,565)
		1		(Sheet 2 of

¹ Backcalculated modulus values using WESDEF.

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² Base and subgrade were combined.

³ AC modulus based on temperature at the time of testing.

⁴ Layer modulus fixed.

⁵ Subbase and subgrade were combined.

Feature	Surface Modulus MPa (psi ¹)	Base Modulus MPa (psi ¹)	Subbase Modulus MPa (psi ¹)	Subgrade Modulus MPa (psi ¹)
		AC Pavements		
T6A	13 128 (1,904,211)	607 (88,083)	171 (24,811) ⁵	171 (24,811) ⁵
T9A	2 447 (354,955)	151 (21,863)		118 (17,168)
T10C	1 155 (167,500) ³	532 (81,482)		118 (17,101)
T16C	2 373 (344,145) ³	343 (49,708)	108 (15,733) ⁵	108 (15,733) ⁵
T17C	2 938 (426,210) ³	1 724 (250,000) ⁴	108 (19,606) ⁵	108 (19,606) ⁵
T18B	2 538 (368,187)	841 (121,945)	94 (13,615) ⁵	94 (13,615) ⁵
T20C	3 009 (436,481) ³	503 (73,008)	125 (18,084) ⁵	125 (18,084) ⁵
T21B	3 223 (467,494)	1 202 (174,426)	100 (14,475) ⁵	100 (14,475) ⁵
A6B	1 875 (271,987)	293 (42,572)	137 (19,872) ⁵	137 (19,872) ⁵
A7B	3 629 (526,382)	382 (55,477)		122 (17,655)
A19B	714 (103,689)	2 914 (422,827)		177 (25,717)
A21B	1 740 (252,449)	664 (96,321)		171 (24,791)
A22B	2 298 (333,282) ³	2 158 (313,074)		174 (25,245)
A24B	956 (138,743)	740 (107,394)		152 (22,117)
A26B	1 479 (214,486)	193 (58,062)		145 (20,963)

Backcalculated modulus values using WESDEF.

B25 Appendix B Tests and Results

Base and subgrade were combined.

AC modulus based on temperature at the time of testing. Layer modulus fixed.

Subbase and subgrade were combined.

Table B	3						
Summa	ry of CB	R Values D	etermine	ed from L	.OW		
Feature	Mean ISM MN/m (kips/in.)	Surface Temperature °C (°F)	Pavement Age, Years	Surface Thickness Mm (in.)	Base Thickness, mm (in.)	Base CBR, %	Subgrade CBR, %
R22B	46 (250)	29 (84)	20	83 (3.25)	152 (6.0)	42	8.0
T11A	64 (325)	37 (99)	22	89 (3.5)	203 (8.0)	44	6.6
T12A	41 (341)	37 (99)	22	89 (3.5)	203 (8.0)	45	6.7
T13A	62 (346)	36 (97)	20	89 (3.5)	203 (8.0)	45	6.8
T15C	(335)	44 (111)	22	89 (3.5)	203 (8.0)	45	6.9
T26B	(329)	29 (84)	20	83 (3.25)	152 (6.0)	47	9.5
A3B	(174)	52 (126)	35	51 (2.0)	203 (8.0)	43	2.8
A15B	(204)	46 (115)	23	76 (3.0)	152 (6.0)	44	7.8
A16B	(304)	46 (115)	23	76 (3.0)	203 (8.0)	52	7.1
A17B	(234)	49 (121)	23	76 (3.0)	152 (6.0)	48	8.9
A30B	53 (343)	49 (121)	23	76 (3.0)	152 (6.0)	54	11
¹ 5- day me	ean air tempe	rature prior to t	est date is 22	2°C (71F)			

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Table B4 Joint De	flection Ratio		
Feature	Joint Type	Construction Date	Joint Ratio, D2/D1 (%)
R1A	1 Transverse	1994	94
R1A	2 Longitudinal	1994	89
R1A	3 Transverse	1994	88
R1A	4 Longitudinal	1994	97
R1A	6 Longitudinal	1994	91
R1A	7 Transverse	1994	89
R1A	8 Longitudinal	1994	77
R1A	9 Transverse	1994	88
		Average	89.1
R10A	73 Longitudinal	1966	66
R10A	74 Transverse	1966	71
R10A	75 Longitudinal	1966	61
R10A	76 Transverse	1966	88
	7 6 114.1010100	Average	
R11A	77 Longitudinal	1966	21
R11A	78 Transverse	1966	91
R11A	79 Longitudinal	1966	75
R11A	80 Transverse	1966	82
131173	oo manoverse	Average	
T1A	5 Transverse	1966	88
T1A	6 Longitudinal	1966	87
T1A	15 Transverse	1966	91
T1A	16 Longitudinal	1966	84
T1A	25 Longitudinal	1966	90
T1A	26 Transverse	1966	86
T2A	35 Longitudinal	1966	87
T2A		1966	83
T2A	36 Transverse	1966	91
T2A	45 Longitudinal		77
	46 Transverse	1966	
T3A	55 Longitudinal	1966	90
T3A T4A	56 Transverse	1966	74
	65 Longitudinal	1966	89
T4A	66 Transverse	1966	74
T7 A	6 Transvers	Average	
T7A	6 Transverse	1966	34
T7A	7 Longitudinal	1966	94
T7A	11 Transverse	1966	90
T7A	12 Longitudinal	1966	75
T7A	16 Longitudinal	1966	88
T7A	17 Transverse	1966	83
		Average	77.3
			(Continued

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Table B4	(Concluded)		
Feature	Joint Type	Construction Date	Joint Ratio, D2/D1 (%)
T8A	5 Transverse	1966	92
T8A	8 Longitudinal	1966	82
T8A	15 Transverse	1966	90
T8A	18 Longitudinal	1966	80
T8A	25 Transverse	1966	81
T8A	28 Longitudinal	1966	83
T8A	31 Transverse	1966	53
		Average	80.1
A1B	1 Transverse	1966	87
A1B	2 Transverse	1966	88
A1B	3 Transverse	1966	81
A1B	4 Longitudinal	1966	92
A1B	5 Longitudinal	1966	84
A1B	6 Longitudinal	1966	70
		Average	83.7
A14B	1 Transverse	1958	77
A14B	2 Transverse	1958	69
A14B	3 Transverse	1958	90
A14B	4 Transverse	1958	66
A14B	5 Longitudinal	1958	78
A14B	6 Longitudinal	1958	84
A14B	7 Longitudinal	1958	67
A14B	8 Longitudinal	1958	70
		Average	75.1
A25B	1 Transverse	1959	46
A25B	2 Transverse	1959	45
A25B	3 Longitudinal	1959	66
A25B	4 Longitudinal	1959	33
		Average	47.5
A28B	1 Transverse	1966	60
A28B	2 Transverse	1966	92
A28B	3 Longitudinal	1966	91
A28B	8 Longitudinal	1966	96
		Average	84.8
A29B	1 Transverse	1966	56
A29B	2 Longitudinal	1966	88
A29B	3 Transverse	1966	69
A29B	4 Longitudinal	1966	97
		Average	77.5

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Appendix C Pavement Condition Survey and Results

Pavement Condition Survey

A pavement condition survey is a visual inspection of the airfield pavements to determine the present surface condition. The condition survey consists of inspecting the pavement surface for various types of distress, determining the severity of each distress, and measuring the quantity of each distress. The estimated quantities and severity of each distress type are used to compute the PCI for each feature. The PCI is a numerical indicator based on a scale from 0 to 100 and is determined by measuring pavement surface distress that reflects the surface condition of the pavement. Pavement condition ratings (from excellent to failed) are assigned to different levels of PCI values. These ratings and their respective PCI value definitions are shown in Figure C1. The distress types, severity levels, methods of survey, and PCI calculations are described in ASTM D5340-93.

The PCI and estimated distress quantities are determined for each feature. The information is based on inspection of a selected number of sample units. Sample units are subdivisions of a feature used exclusively to facilitate the inspection process and reduce the effort needed to determine distress quantities and the PCI. Each feature was divided into sample units. The sample units for AC pavement features were approximately 465 sq m (5,000 sq ft). A statistical sampling technique was used to determine the number of sample units to be inspected to provide a 95 percent confidence level. Sample units were chosen along the centerline of the taxiways and randomly on the runway and on the aprons. Sample unit locations for the various runway features are shown in Figures C2 and C3. Sample unit locations for the taxiway and apron features are shown in Figures C4 through C11. The surveyed sample units are circled. After the sample units were inspected, the mean PCI of all sample units within a feature was calculated and the feature was rated as to its condition: excellent, very good, good, fair, poor, very poor, or failed.

Analysis of PCI Data

The distress information collected during the survey was used with the Micro PAVER computer program to estimate the quantities of distress types for each feature. This information is presented along with the PCI, general rating, and distress mechanism (load, climate, or other) in Appendix E. Photos C1 through C12 show various types of distresses observed during the survey.

AR 420-72 (Headquarters, Department of the Army 2000) requires that all airfield pavements be maintained at or above the following PCI ranges:

```
All runways > 70
All primary taxiways \ge 60
All aprons and secondary taxiways > 55
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AR 420-72 (Headquarters, Department of the Army 2000) also requires that the following PCI range for airfield pavements shall be used for the Installation Status Report (ISR) rating:

```
70 < PCI \le 100 equals an ISR Green rating 55 < PCI \le 70 equals an ISR Amber rating 0 < PCI \le 55 equals an ISR Red rating
```

The PCI for each sample unit inspected was calculated and stored on a Micro PAVER file for LAAF. The mean PCI for each feature was then calculated to determine the general condition or rating of the feature as shown in Figure C12. A comparison of the 2001, 1996, and 1991 PCI results is summarized in Table C1. The PCI of sixteen of the primary airfield features decreased from one to twenty-five points during the 1996 to 2001 period. This loss in PCI points is considered normal (4 to 6 points per year). The PCI of nine of the primary airfield features increased from two to twenty-one points during the 1996 to 2001 period. This was because scaling was not observed in 2001 as compared to 1996. The increase in PCI of seven to fifteen points on the Yellow Ramp was because the severity levels of the joint reflective cracking was considered less severe in 2001 than in 1996.

PAVEMENT CONDITION NDEX (PCI)	PAVEMENT CONDITION RATING
100	EXCELLENT
85	VERY GOOD
71	LICE GOOD
70	GOOD
56	
55 41	FAIR
40	POOR
26	
25	VERY POOR
11	
10 0	FAILED

Figure C1. Scale for pavement condition rating

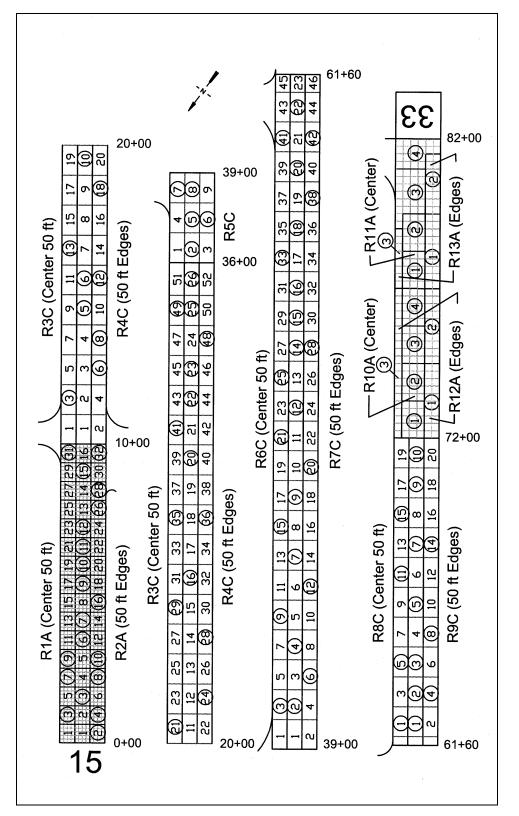


Figure C2. Sample unit layout, Runway 15-33, features R1A through R13A

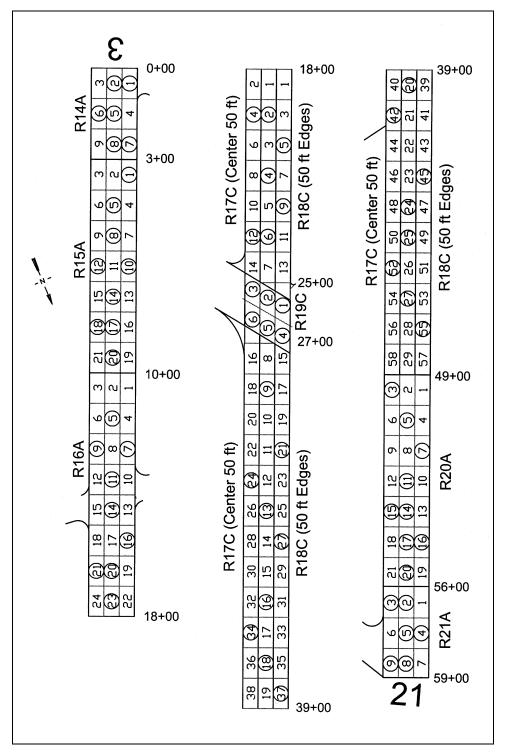


Figure C3. Sample unit layout, Runway 03-21, features R14A through R21A

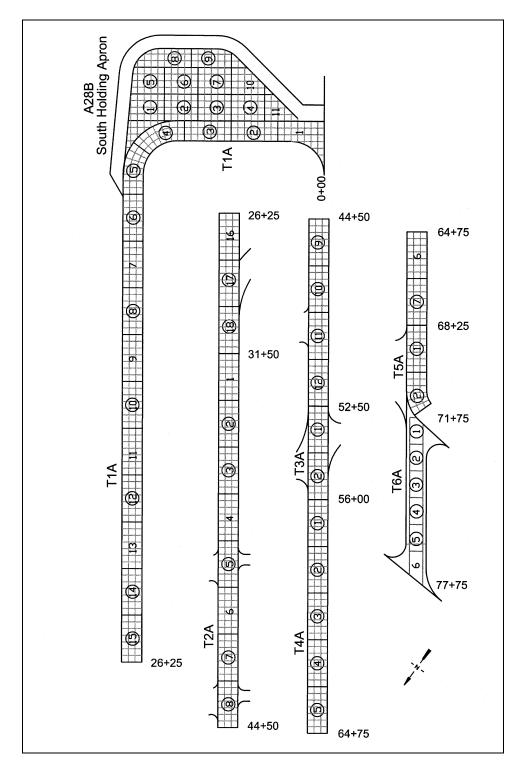


Figure C4. Sample unit layout, Taxiway K and the South Holding Apron, (T1A, T2A, T3A, T4A, T5A, T6A, and A28B)

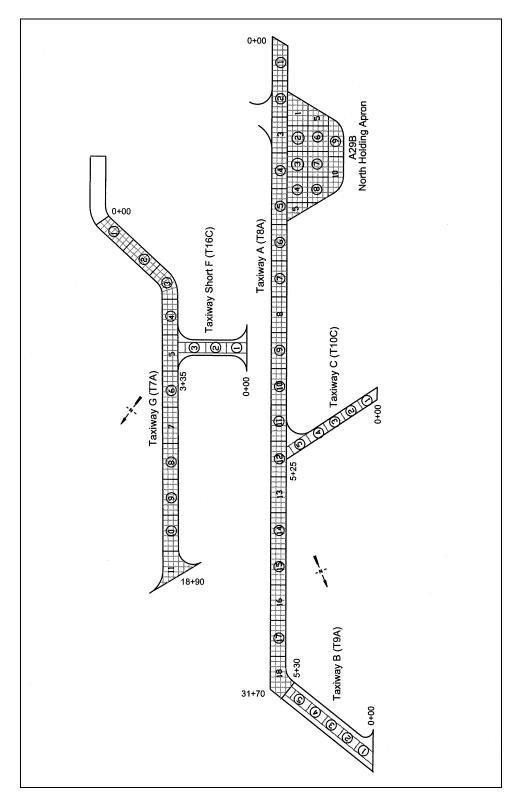


Figure C5. Sample unit layout, Taxiways A, B, C, G, Short F and the North Holding Apron (T8A, T9A, T10C, T7A, T16C and A29B)

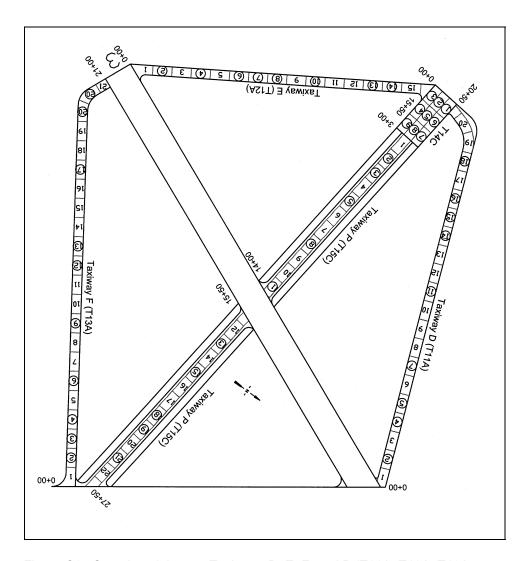


Figure C6. Sample unit layout, Taxiways D, E, F, and P (T11A, T12A, T13A, T14C, and T15C)

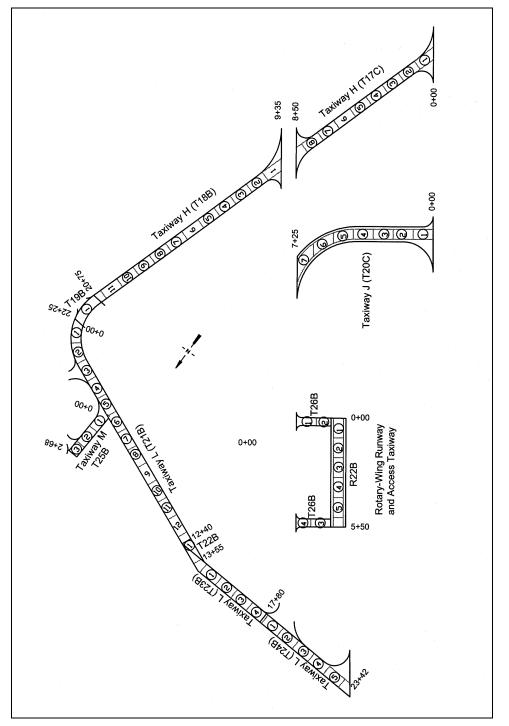


Figure C7. Sample unit layout, Rotary-Wing Runway and Taxiway, Taxiway H, J, L and M (R22B, T17C, T18B, T19B, T19B, T20C, T21B, T22B, T23B, T24B, T25B, and T26B)

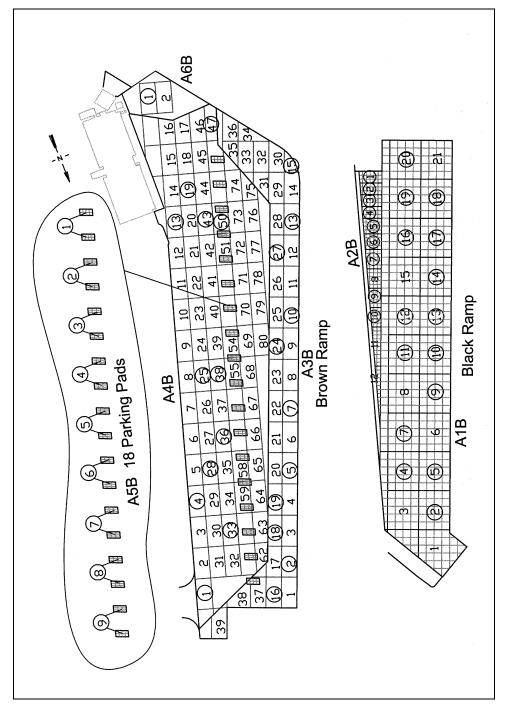


Figure C8. Sample unit layout, Black Ramp and Brown Ramp, (A1B, A2B, A3B, A4B, A5B, and A6B)

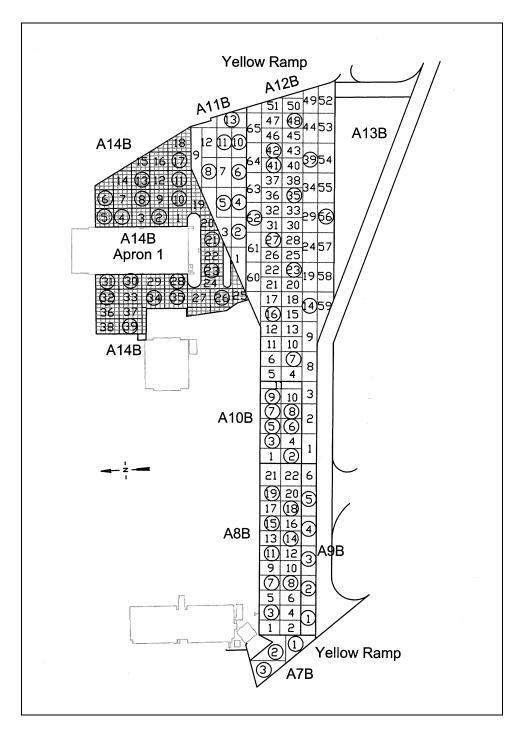


Figure C9. Sample unit layout, Yellow Ramp and Apron 1 (A7B, A8B, A9B, A10B, A11B, A13B, and A14B)

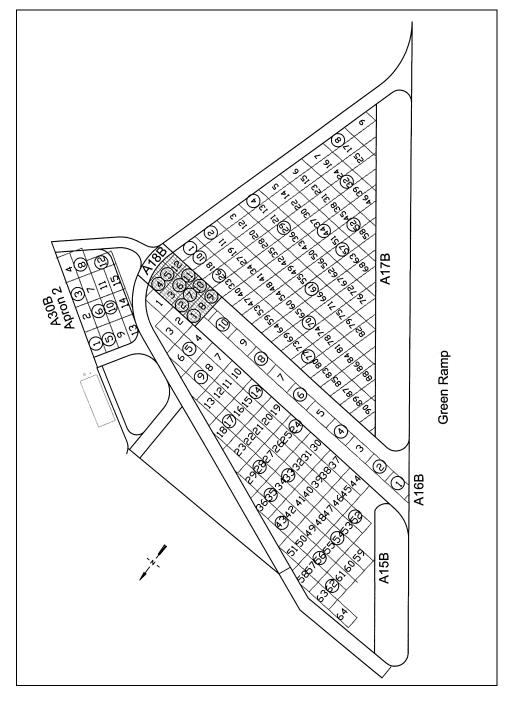


Figure C10. Sample unit layout, Green Ramp and Apron 2, (A15B, A16B, A17B, A18B, and A30B)

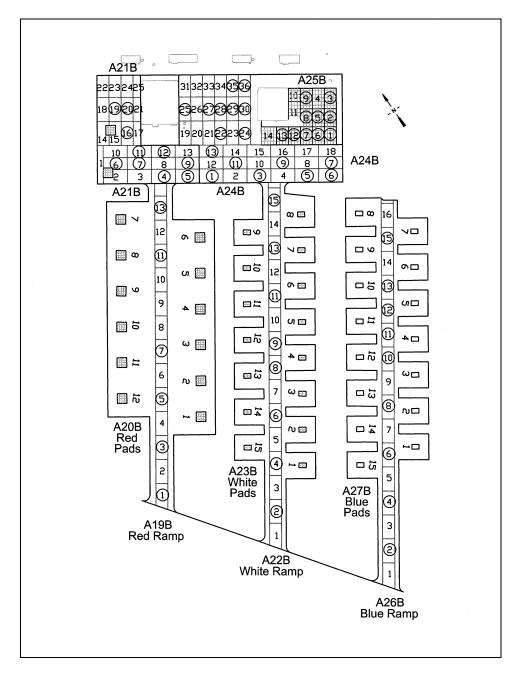


Figure C11. Sample unit layout, Red Ramp, White Ramp, and Blue Ramp, (A18B, A19B, A20B, A21B, A22B, A23B, A24B, A25B, A26B, and A27B)

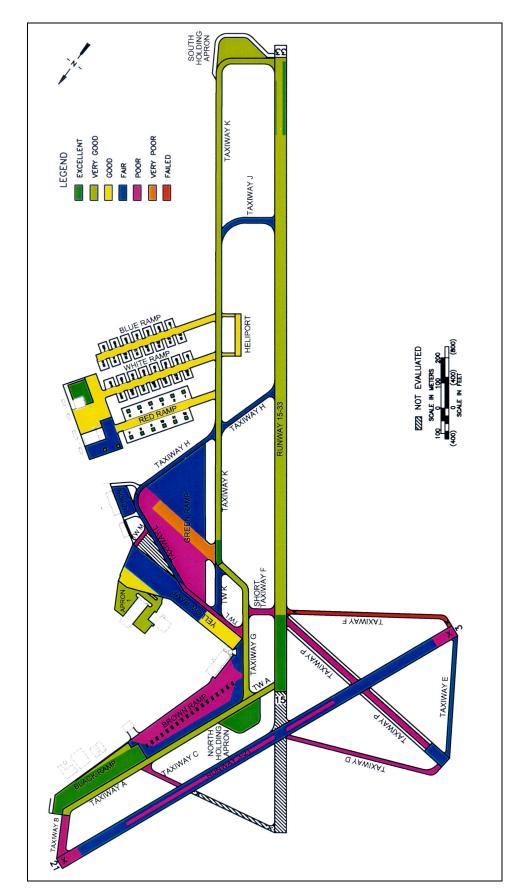


Figure C12. Pavement condition rating summary

Feature	1991 PCI	1996 PCI	2001 PCI	2001 Rating	Change in PCI From 1996 to 2001 (+ or -)	Pavement Type
reature	FOI		Runv		2001 (1 01 -)	Туре
R1A	61	97 ¹	97	Excellent	0	PCC
R2A	3		94	Excellent		PCC
R3C	64	100 ²	80	Very good	-20	AC
R4C	3	100 ²	82	Very good	-18	AC
R5C	64	100 ²	82	Very good	-18	AC
R6C	64	100 ²	75	Very good	-25	AC
R7C	3	100 ²	82	Very good	-18	AC
R8C	81	100 ²	77	Very good	-23	AC
R9C	3	100 ²	83	Very good	-17	AC
R10A	79	81	80	Very good	-1	PCC
R11A	80	84	79	Very good	-5	PCC
R12A	3	91	86	Very good	-5	PCC
R13A	3	81	88	Very good	+7	PCC
R14A	32	34	29	Very good	-5	AC/PCC
R15A	64	46	43	Fair	-3	AC
R16A	64	46	44	Fair	-2	AC
R17C	64	46	40	Poor	-6	AC
R18C		46	43	Fair	-3	AC
R19C	64	46	42	Fair	-4	AC
R20A	64	56	42	Fair	-14	AC
R21A	64	17	31	Poor	+14	AC/PCC
R22B	64	59	64	Good	+5	AC
			Taxiv	vays		
T1A	90	68	79	Very good	+11	PCC
T2A	87	76	71	Very good	-5	PCC
ТЗА	89	75	72	Very good	-3	PCC
T4A	93	73	82	Very good	+9	PCC
T5A	93	73	86	Excellent	+13	PCC
T6A	57	63	41	Fair	-21	AC
T7A	91	75	83	Very good	+8	PCC
T8A	86	73	75	Very good	+2	PCC
T9A	68	42	39	Poor	-3	AC
T10C	46	42	30	Poor	-12	AC
T11A	46	46	33	Poor	-13	AC

¹ Reconstructed in 1994.

² Overlayed in 1994.

³ Not surveyed prior to 1996.

Feature	1991 PCI	1996 PCI	2001 PCI	2001 Rating	Change in PCI From 1996 to 2001 (+ or -)	Pavement Type
			Taxiways (Continued)		
T12A	46	46	47	Fair	+1	AC
T13A	45	15	7	Failed	-8	AC
T14C	69	44	44	Fair	0	PCC
T15C	45	46	26	Poor	-20	AC
T16C	27	48	34	Poor	-14	AC
T17C	46	54	46	Fair	-8	AC
T18B	46	50	55	Fair	+5	AC
T19B	37	46	47	Fair	+1	AC/PCC
T20C	46	46	49	Fair	+3	AC
T21B	46	46	44	Fair	-2	AC/PCC
T22B	46	46	46	Fair	0	AC/PCC
T23B	37	47	27	Poor	-20	AC/PCC
T24B	37	47	36	Poor	-11	AC/PCC
T25B	37	33	40	Poor	+7	AC/PCC
T26B	64	59	64	Good	+5	AC
			Apr	ons		
A1B	92	77	86	Very good	+9	PCC
A2B	3	76	84	Very good	+8	PCC
A3B	46	46	43	Fair	-3	AC
A4B	46	49	37	Poor	-12	AC/PCC
A5B	3	82	82	Very good	0	PCC
A6B	46	46	47	Fair	+1	AC
A7B	46	46	41	Fair	-5	AC
A8B	37	54	61	Good	+7	AC/PCC
A9B	37	42	57	Good	+15	AC/PCC
A10B	37	46	46	Fair	0	AC/PCC
A11B	37	45	60	Good	+15	AC/PCC
A12B	37	45	55	Fair	+10	AC/PCC
A13B	46	46	4			AC
A14B	92	80	85	Very good	+5	PCC
A15B	46	46	36	Poor	-10	AC
A16B	21	18	21	Very poor	+3	AC
A17B	46	46	55	Fair	+9	AC
A18B	44	32	33	Poor	+1	PCC

Not surveyed prior to 1996.
 Not surveyed in 2001.

Table C1 (Concluded)										
Feature	1991 PCI	1996 PCI	2001 PCI	2001 Rating	Change in PCI From 1996 to 2001 (+ or -)	Pavement Type				
Aprons (Continued)										
A19B	46	64	64	Good	0	AC				
A20B	94	87	88	Excellent	+1	PCC				
A21B	46	61	54	Fair	-7	AC				
A22B	46	64	64	Good	0	AC				
A23B	89	85	90	Excellent	+5	PCC				
A24B	46	64	57	Good	-7	AC				
A25B	89	79	91	Excellent	+12	PCC				
A26B	46	64	64	Good	0	AC				
A27B	75	76	77	Very good	+1	PCC				
A28B	91	80	80	Very good	0	PCC				
A29B	93	71	92	Excellent	+21	PCC				
A30B	46	46	47	Fair	+1	AC				
						(Sheet 3 of 3				



Photo C1. Runway 15-33, Feature R3C, low-severity longitudinal crack



Photo C2. Runway 15-33, Feature R3C, vegetation in longitudinal crack



Photo C3. Runway 15-33, Feature R12A, low-severity corner spall



Photo C4. Runway 03-21, Feature R15A, medium-severity block cracking



Photo C5. Runway 03-21, Feature R17C, low-severity alligator cracking



Photo C6. Taxiway K, Feature T1A, filled longitudinal crack



Photo C7. Taxiway K, Feature T2A, medium-severity longitudinal crack



Photo C8. Taxiway A, Feature T8A, failure at intersection of A and G



Photo C9. Yellow Ramp, Feature A9B, medium-severity joint reflective cracking



Photo C10. Green Ramp, Feature A15B, depression

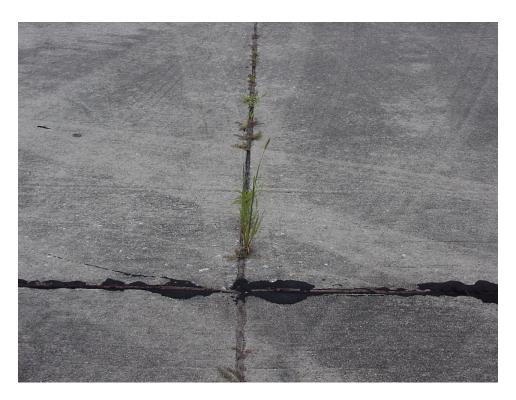


Photo C11. South Holding Apron, Feature A28B, vegetation in joints



Photo C12. South Holding Apron, Feature A28B, medium-severity joint spall

Appendix D Structural Analyses

General

The performance of the airfield pavement facilities was analyzed for either the mixture of traffic shown in Table A4 or for specific aircraft traffic based on usage.

The mixture of aircraft traffic listed in Table A4 was converted to equivalent traffic of the critical aircraft based on the procedure outlined in TM 5-825-2/ DM 21.3/AFM 88-6, Chapter 2 (Headquarters, Departments of the Army, the Air Force, and the Navy 1978). The critical aircraft is defined as that aircraft within a mixture of various aircraft operating at a facility that will impose a more severe combination of gear load and tire pressure than the other assigned aircraft at their respective pass levels. For the projected aircraft traffic mixture, the critical aircraft within the mixture was determined and the number of passes of the critical aircraft required to produce an effect on the pavement equivalent to the total mixture of traffic was computed. The current Corps of Engineers (CE) design criteria is utilized to analyze and equate the various aircraft loadings. PCC and AC pavements have different design criteria and, thus, a different number of equivalent operations of the design aircraft. The critical aircraft operating on the PCC and AC primary fixed-wing pavements (Runway 15-33, Taxiways A, G, Short F, H (T17C), K, and J, the Black Ramp and the North and South Holding Aprons) was determined to be the C-17 aircraft. The performance of Runway 03-21, Taxiways B, C, D, E, and F, and the Brown Ramp was based on the C-130 aircraft. These facilities are utilized for overflow C-130 aircraft. The remaining fixed-wing pavements (Taxiways H (T18B and T19C), L, M, the Yellow Ramp, Green Ramp, and Aprons 1 and 2) were evaluated for C-37 aircraft traffic. The evaluation of all rotary-wing pavements (the Red, White, and Blue Ramps, and the Rotary-Wing Runway and taxiway) was based on the CH-47 aircraft. Table D1 presents the critical aircraft computation results for the airfield.

The operational ACN values determined for the critical aircraft (263 Mg (580-kip) C-17 aircraft) are shown in Table D2 for the four subgrade strength categories.

In a wartime scenario, aircraft may be required to operate at weights that exceed normal peacetime loads. These aircraft would have a higher ACN, would cause more damage, and reduce the life of the pavement. A mobilization ACN can be determined from the appropriate ACN-PCN curve presented in ETL 1110-3-394 (Headquarters, Department of the Army 1991). Typical ACN-PCN curves for the C-130 are shown in Figure D1. For contingency planning, it is often necessary to determine the largest aircraft that can safely land on an airfield. Runway length is a critical factor in this determination. Minimum take-off distances for maximum take-off weights of aircraft are also given in ETL 1110-3-394 (Headquarters, Department of the Army 1991). For a specified aircraft, the ACN can be determined from the ACN-PCN curve and then the effect of the higher loads on the airfield can be determined from the ACN/PCN ratio. Specific aircraft mobilization traffic requirements are contained in classified mobilization plans and are not included in this report.

ACN-PCN Method of Reporting Pavement Structural Condition

The ACN-PCN method is structured so that the structural evaluation of a payement for a particular aircraft can be accomplished by using the ratio of the aircraft ACN to the pavement PCN. For a given pavement life and a given number of operations of a particular aircraft, there is a relationship between the ACN/ PCN ratio and the percent of pavement life used by the applied traffic. For a given ACN/PCN ratio, a relationship exists for the number of operations that will produce failure of the payement. These relationships provide a method for evaluating a pavement for allowable load depending on an acceptable degree of damage to the pavement or an allowable number of operations of a particular aircraft to cause failure of a payement. For aircraft having an ACN equal to the PCN, the predicted failure of the pavement would equal the design life of the pavement. Aircraft having ACN's higher than the pavement PCN would overload the pavement and decrease the life of the pavement. Likewise if the ACN of the operational aircraft were less than the pavement PCN, the life of the pavement would be greater than the design life. If the operational ACN is greater than the pavement PCN and a decrease in pavement life is not acceptable, then structural improvement of the pavement is required to bring the pavement PCN up to or greater than the operational ACN.

PCN Analysis

Modulus values shown in Appendix B were input into the computerized Layered Elastic Evaluation Program (LEEP) to determine the load-carrying capacity of each pavement feature in accordance with UFC 3-260-03 (Headquarters, Departments of the Army, Navy, and the Air Force 2001). Using the design aircraft and traffic levels for normal operations, a PCN was determined for each pavement feature. The PCN is determined using the allowable gross aircraft load and the subgrade strength category. To determine the subgrade category,

backcalculated subgrade moduli were converted to CBR values using the correlation E = 1500 (CBR). Table D3 presents a summary of the evaluation of each pavement feature in terms of allowable gross aircraft loadings, PCN, and overlay thicknesses required to increase the structural capacity such that the mission traffic can be supported (PCN \geq operational ACN). The Airfield Pavement Evaluation Chart (APEC) presented in Illustration 1 shows a layout of the airfield pavements and corresponding PCN for each facility.

The PCN codes and PCI for each feature were analyzed to establish ISR ratings listed in Table 3-1. An ISR Rating for each pavement facility is shown in Illustration 2. AR 420-72 (Headquarters Department of the Army 2000) requires that the following ACN/PCN ratios be used in determining ISR ratings for air-field pavement facilities.

ACN/PCN \leq 1.0 equals an ISR Green rating 1.0 < ACN/PCN \leq 1.5 equals an ISR Amber rating ACN/PCN > 1.5 equals an ISR Red rating

For those features having a PCN< the required operational ACN, the additional pavement thickness (overlay) needed to support the mission traffic was computed. Although the required increase in pavement strength is presented as an overlay thickness, several other approaches could be considered. A detailed analysis will be required to select and design the most cost-effective repair or improvement alternative. It should be noted that although less than 102 mm (4-in.) -thick AC overlay requirements are indicated in Table D3, the following minimum thicknesses are recommended in UFC 3-260-2 (Headquarters, Departments of the Army, Navy, and the Air Force 2001):

- a. 51 mm (2-in.) -thick minimum AC overlay over AC pavements.
- b. 102 mm (4-in.) -thick minimum AC overlay over PCC pavements.
- c. 152 mm (6-in.) -thick minimum PCC partially or nonbonded overlay.
- d. 51 mm (2-in.) -thick minimum PCC fully bonded overlay over PCC pavements.

These minimum overlay requirements are required to control the degree of cracking which will occur in the base pavement (existing pavement) due to the application of the design traffic. If those features needing structural improvements are not upgraded in a timely manner pavement may deteriorate rapidly and result in damage to all pavement layers and an increase in cost for the necessary improvements. Excessive damage may also result in lengthy closures of the pavement facility.

The PCN codes for the weakest feature within each pavement facility are shown in Table D4. The PCN code includes the PCN numerical value, pavement type, subgrade category, allowable tire pressure, and method used to determine the PCN. An example of a PCN code is: 30/F/A/W/T, with 30 expressing the numerical PCN value, F indicating a flexible pavement, A indicating high

strength subgrade. W indicating high-allowable tire pressure, and T indicating that the PCN value was obtained by a technical evaluation. Table D5 presents a description of the letter codes comprising the PCN code. Each PCN assumes that only the design aircraft will be used for the stated number of passes. Theoretically, if the PCN is equal to the ACN, the pavement should perform satisfactorily and require only routine maintenance through the length of the analysis period. There may be situations when it is necessary to overload a pavement, i.e., the ACN is greater than the PCN. Examples are emergency landings, short-term contingencies, exercises, and air shows. Pavements can usually support some overload; however, pavement life can be reduced. If the PCN were less than the ACN, the ACN/PCN ratio would be greater than 1 and the pavement would be expected to fail before reaching the end of the analysis period. As a general rule, ACN/PCN ratios of up to 1.25 have minimal impact on pavement life. If the ACN/PCN ratio is between 1.25 and 1.50, aircraft operations should be limited to 10 passes and the payement inspected after each operation. Aircraft operations resulting in an ACN/PCN ratio over 1.50 should not be allowed except for emergencies. An example of how to use the ACP/PCN method to determine if an aircraft will overload a pavement is shown below.

Example Problem

Runway 15-33, the PCC portion of Taxiway K, Taxiways G and A and Feature A1B of the Black Ramp must be used for 1,000 passes of a C-17 aircraft operating at a take-off weight of 263 300 kg (580,000 lb). Find the weakest features on each facility and determine if they can support this traffic?

Solution

From Table D3, determine the weakest feature on R/W 15-33, the PCC portion of Taxiway K, Taxiways G and A and the Black Ramp; from Figure D1 determine the ACN of a 263 300 kg (580,000 lb) C-17, and then calculate the ACN/PCN ratio using the appropriate PCN from Table D3.

a. Runway 15-33.

Weakest feature is R10A (see Table D3) PCN for R10A = 52/R/B/W/T ACN for a 263 300 kg (580,000 lb) C-17 on a medium strength subgrade = 49/R/B/W/T (see Figure D1). ACN/PCN ratio is 49/52 or 0.94; therefore R10A should perform satisfactorily.

b. PCC portion of Taxiway K.

Weakest feature is T4A (see Table D3) PCN for T4A = 31/R/B/W/T ACN for a C-17 on a low strength subgrade = 49/R/B/W/T (see Figure D1).

ACN/PCN ratio is 49/31 or 1.58; therefore T4A should be limited to emergency C-17 traffic.

c. Taxiway G (T7A).

PCN for T7A = 57/R/C/W/T

ACN for a C-17 on a low strength subgrade = 49/R/C/W/T (see Figure D1).

ACN/PCN ratio is 49/57 or 0.86; therefore T7A should perform satisfactorily.

d. Taxiway A (T8A).

PCN for T8A = 59/R/B/W/T

ACN for a C-17 on a low strength subgrade = 49/R/B/W/T (see Figure D1).

ACN/PCN ratio is 49/59 or 0.83; therefore T8A should perform satisfactorily.

e. Black Ramp (A1B).

PCN for A1B = 45/R/C/W/T

ACN for a C-17 on a low strength subgrade = 49/R/C/W/T (see Figure D1).

ACN/PCN ratio is 49/45 or 1.09; therefore the overload on A1B will have minimal impact on the pavement life.

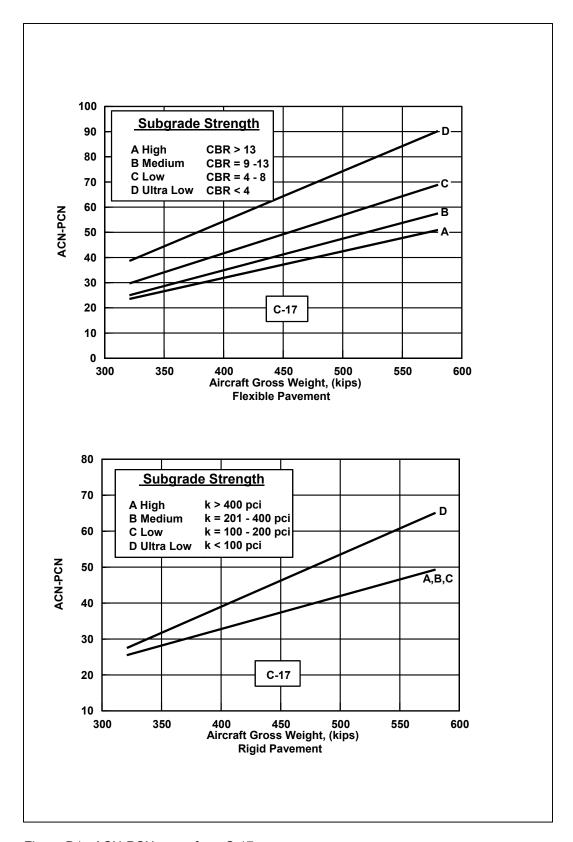


Figure D1. ACN-PCN curve for a C-17

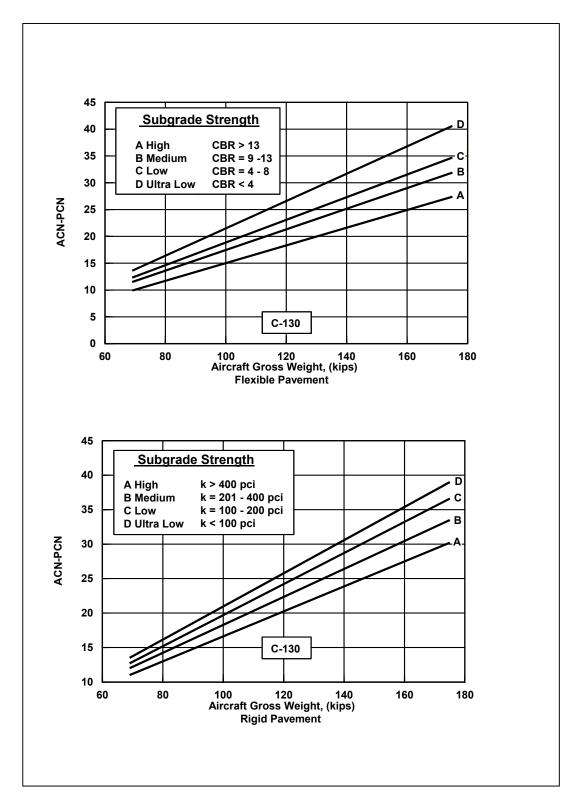


Figure D2. ACN-PCN curve for a C-130 aircraft

Table D1
Determination of Critical Aircraft and Design Traffic

Primary Fixed-wing Pavements Runway 15-33, Taxiway A, Short F, G, H (T17C), J, K, Black Ramp and Holding Aprons

AC Fixed-Wing Pavements

Fixed-Wing Aircraft	Gross Weight kg (lb)	20-year Projected Aircraft Passes	20-year Equivalent C-17 Passes
C-130	70 300 (155,000)	20,000	21
C-17	263 320 (580,000)	3,220	3,220
C-141	146 642 (323,000)	6,500	1,508
C-5A	349 126 (769,000)	560	2
C-9	49 032 (108,000)	2,000	2
B-707	141648 (312,000)	60	6
B-727	95 113 (209,500)	860	256
B-737	68 100 (150,000)	820	22
B-747	362 292 (798,000)	60	190
B-757	116 224 (256,000)	400	10
B-767	185 686 (409,000)	220	131
DC-10-40	264 682 (583,000)	120	109
DC-9	54 934 (121,000)	60	1
KC-10	267 860 (590,000)	40	40
KC-135	136 926 (301,600)	200	12
L-1011	226 092 (498,000)	800	1,051

20-year Total Equivalent C-17 passes @ 263 320 (580,000) = 6,581(use 6,600)

PCC Fixed-Wing Pavements

Fixed-Wing Aircraft	Gross Weight kg (lb)	20-year Projected Aircraft Passes	20-year Equivalent C-17 Passes
C-130	70 300 (155,000)	20,000	42
C-17	263 320 (580,000)	3,220	3,220
C-141	146 642 (323,000)	6,500	5,472
C-5A	349 126 (769,000)	560	149
C-9	49 032 (108,000)	2,000	107
B-707	141648 (312,000)	60	12
B-727	95 113 (209,500)	860	44,766
B-737	68 100 (150,000)	820	3,459
B-747	362 292 (798,000)	60	104
B-757	116 224 (256,000)	400	39
B-767	185 686 (409,000)	220	527
DC-10-40	264 682 (583,000)	120	181
DC-9	54 934 (121,000)	60	25
KC-10	267 860 (590,000)	40	73
KC-135	136 926 (301,600)	200	21
L-1011	226 092 (498,000)	800	2,432

20-year Total Equivalent C-17 passes @ 263 320 (580,000) = 60,629 (use (61,000)

(Sheet 1 of 2)

Table D1 (Concl	uded)				
Runv		Pavements , D, E, F, and the Brown	Ramp		
	AC and PCC Fixed	d-Wing Pavements			
Fixed-Wing Aircraft	Gross Weight kg (lb)	20-year Projected Aircraft Passes	20-year Equivalent C-130 Passes		
C-130	70 300 (155,000)	50,000	50,000		
20-	ear Total Equivalent C-13	0 passes @ 70 300 (155,	000) = 50,000		
Taxiways H (T18B		Pavements low and Green Ramps, a	and Aprons 1 and 2		
	AC and PCC Fixed	d-Wing Pavements			
Fixed-Wing Aircraft	Gross Weight kg (lb)	20-year Projected Aircraft Passes	20-year Equivalent C-37 Passes		
C-37	41 087 (90,500)	50,000	50,000		
20-year Total Equivalent C-37 passes @ 41 087 (90,500) = 50,000					
Rotary-Wing Pavements Red Ramp, White Ramp, Blue Ramp, and the Rotary-Wing Runway and Taxiway					
	AC and PCC Fixed	d-Wing Pavements			
Fixed-Wing Aircraft	Gross Weight kg (lb)	20-year Projected Aircraft Passes	20-year Equivalent CH-47 Passes		
CH-47	22 700 (50,500)	50,000	50,000		
2	O-year Total Equivalent Ch	l-47 passes @ 22 700 (50	0,000) = 306		
			(Sheet 2 of 2)		

Table D2 Determinati	on of ACN Values fo	r the Critical	Aircraft
	Fixed-Wing	AC Pavements	
Design Aircraft	Weight kg (lb)	Subgrade Category ¹	ACN or Required PCN
C-17	263 320 (580,000)	A B C	50 57 69
		Ď	90
	Fixed-Wing	PCC Pavements	
Design Aircraft	Weight	Subgrade Category ¹	ACN or Required PCN
C-17	kg (lb) 263 320 (580,000)	A	49
0-17	203 320 (300,000)	B	49
		C	49
		D	65
Daalam		AC Pavements	
Design Aircraft	Weight kg (lb)	Subgrade Category ¹	ACN or Required PCN
C-130	70 300 (155,000)	A	24
	, , ,	В	28
		C	30 35
	Fixed-Wing	PCC Pavements	33
Design	Weight	Subgrade	
Aircraft	kg (lb)	Category ¹	ACN or Required PCN
C-130	70 300 (155,000)	Α	26
		В	29
		C	32 34
	Fixed-Wind	AC Pavements	1 0.
Design Aircraft	Weight kg (lb)	Subgrade Category ¹	ACN or Required PCN
C-37	41 087 (90,500)	A	24
	(23,223)	В	26
		C	28
	Fixed Wing	PCC Pavements	29
Design	Weight	Subgrade	
Aircraft	kg (lb)	Category ¹	ACN or Required PCN
C-37	41 087 (90,500)	Α	27
		В	29
		C	30
	Rotary-Wind	AC Pavements	1 50
Design	Weight	Subgrade	
Aircraft	kg (lb)	Category ¹	ACN or Required PCN
CH-47	22 700 (50,000)	A	7
		B C	9
		D	12
	Rotary-Wing	PCC Pavements	•
Design Aircraft	Weight kg (lb)	Subgrade Category ¹	ACN or Required PCN
CH-47	22 700 (50,000)	A	9
	(,)	В	10
		C	10
1		D	11
See Table D5 fo	r subgrade category.		

		Design Aircraft ²		7.0		Design	Design Aircraft²				The	Theoretical Overlay Requirements, mm (in.)	ərlay m (in.)
		Test Number	Туре	Strength [†] CBR, % or					Allowable Gross			PCC Partial	
Pavement Facility	Feature	or Station m (ft)	Traffic Area	K, kPa/mm (psi/in.)	Aircraft	Weight Kg (lb)	Passes	ACN	Load Mg (kips)	PCN	AC	Bond	PCC No Bond
						gu	Pavements						
Runway 15-33	R1A	0+00-3+05 (0+00-10+00)	۷	58 (215)	C-17	263 320 (580,000)	61,000	49/R/B/W/T	263 (580+) ³	60/R/B/W/T	0 (0.0)	0 (0.0)	0.0)
	R3C	3+05-11+02	O	15	C-17	263 320 (580,000)	009'9	50/F/A/W/T	263 (580+) ³	120/F/A/W/T	(0.0)	NA ⁴	. 4
	R5C	11+02-11+94 (36+16-39+16)	O	15	C-17	263 320 (580,000)	009'9	50/F/A/W/T	263 (580+) ³	120/F/A/W/T) (0.0)	NA⁴	4
	R6C	11+94-18+82 (39+16-61+76)	O	15	C-17	263 320 (580,000)	009'9	50/F/A/W/T	263 (580+) ³	120/F/A/W/T	0.0)	NA ⁴	4
	R8C	18+82-21+95 (61+76-72+00)	O	41	C-17	263 320 (580,000)	009'9	50/F/A/W/T	263 (580+) ³	89/F/A/W/T	0.0)	NA ⁴	⁴
	R10A	21+95-23+47 (72+00-77+00)	∢	63 (232)	C-17	263 320 (580,000)	61,000	49/R/B/W/T	263 (580+) ³	52/R/B/W/T	0.0)	0.0)	0.0)
	R11A	23+47-24+99 (77+00-82+00)	∢	59 (218)	C-17	263 320 (580,000)	61,000	49/R/B/W/T	263 (580+) ³	59/R/B/W/T	0.0)	0.0)	(0.0)
Runway 03-21	R14A	0+00-0+91	⋖	33 (120)	C-130	70 370 (155,000)	20,000	32/R/C/W/T	23 (50)	8/R/C/W/T	683 (26.9)	VA	366 (14.4)
	R15A	0+91-3+05	⋖	18,	C-130	70 370 (155,000)	50,000	24/F/A/W/T	70 (155+) ³	89/F/A/W/T	(0.0)	NA ⁴	4
	R16C	3+05-5+49 (10+00-18+00)	O	12	C-130	70 370 (155,000)	50,000	28/F/B/W/T	70 (155+) ³	62/F/B/W/T	0.0)	NA⁴	4
	R17C	5+49-14+94 (18+00-49+00)	O	10	C-130	70 370 (155,000)	50,000	28/F/B/W/T	53 (116)	20/F/B/W/T	52 (2.0)	NA ⁴	⁴
	R19C	7+62-8+23 (25+00-27+00)	O	1-	C-130	70 370 (155,000)	50,000	28/F/B/W/T	70 (155+) ³	35/F/B/W/T	0.0)	NA ⁴	4
	R20A	14+94-17+07 (49+00-56+00)	⋖	6	C-130	70 370 (155,000)	20,000	28/F/B/W/T	36 (79)	13/F/B/W/T	(4.7)	NA⁴	4
	R21A	17+07-17+98 (56+00-59+00)	⋖	34 (126)	C-130	70 370 (155,000)	20,000	32/R/C/W/T	23 (51)	8/R/C/W/T	671 (26.4)	¥	363 (14.3)
		(22.22.22.12.1		(2=:)		(222,221)			(12)		Î.		(Sheet 1 of 5)

Values based on correlations between CBR and/or k and the backcalculated subgrade modulus.

² Determined for the critical aircraft (see Table D1).
³ The allowable gross load is greater than the maximum take-off weight of the critical aircraft.
⁴ Was not calculated because feature was evaluated as a flexible pavement.

Table D3 (C	D3 (Continued)	ed)											
				Subgrade		Design	Design Aircraft²				Thec Requir	Theoretical Overlay Requirements, mm (in.	ərlay m (in.)
		Test Number		Strength ¹ CBR, % or					Allowable Gross			PCC Partial	
Pavement Facility	Feature	or Station m (ft)	Traffic Area	K, kPa/mm (psi/in.)	Aircraft	Weight Kg (lb)	Passes	ACN	Load Mg (kips)	PCN	AC	Bond	PCC No Bond
					<u>.</u>	ng	Pavements						
Taxiway K	T1A	09+6-00+0	А	37	C-17	263 320	61,000	49/R/C/W/T	Š 263	50/R/C/W/T	0	0	0
		(0+00-31+50)		(137)		(280,000)			(580+) ٔ		(0.0)	(0.0)	(0.0)
	T2A	9+60-16+00	⋖	43	C-17	263 320 (580 000)	61,000	49/R/B/W/T	180 (397)	32/R/B/W/T	206	246	318
	T3A	16+00-17+07	۷	57	C-17	263 320	61.000	49/R/B/W/T	263	59/R/B/W/T	0	0	(2)
	5	(52+50-56+00)		(209)	:	(580,000)	0		(580+)		(0.0)	(0.0)	(0.0)
	T4A	17+07-20+80	٧	38	C-17	263 320	61,000	49/R/B/W/T	174	31/R/B/W/T	234	239	323
		(56+00-68+25)		(140)		(580,000)			(383)		(9.2)	(9.4)	(12.7)
	T5A	20+80-21+87	А	57	C-17	263 320	61,000	49/R/B/W/T	263	59/R/B/W/T	0	0	0
		(6/+1/-67+89)		(209)	ļ	(280,000)			$\overline{}$	ļ	(0.0)	(0.0)	(0.0)
	49 I	21+87-23+70	∢	1,	C-17	263 320 (580 000)	6,600	50/F/A/W/ I	166 (366)	28/F/A/W/1	127	Z Z	
Taxiway G	T7A	0+00-5+76	٥	5,1	C-17	263 320	61 000	49/R/C/W/T	263	57/R/C/W/T	(5:5)	c	c
)	<u> </u>	(0+00-18+90)	<u> </u>	(190)	<u>:</u>	(580,000))))		(580+)		(0.0)	(0.0)	(0.0)
Taxiway A	T8A	0+91-9+66 (0+00-31+70)	4	56 (208)	C-17	263 320 (580.000)	61,000	49/R/B/W/T	263 (580+) ³	59/R/B/W/T	(0,0)	0 0)	0 (0.0)
Taxiway B	T9A	3+05-1+62	٧	11	C-130	70 370	50,000	28/F/B/W/T	32	12/F/B/W/T	170	NÀ⁴	4
	0 0 0 0	(05-5-00-0)				(100,000)		! !! !!		!!!!	(0.0)	4	4
Taxiway C	T10C	0+00-1+60 (0+00-5+25)	၁	11	C-130	70 370 (155,000)	50,000	28/F/B/W/T	53 (116)	20/F/B/W/T	79 (3.1)	NA [‡]	· I
Taxiway D	T11A ⁵	0+00-6+25	2	7	C-130	70 370	20,000	30/F/C/W/T	20	T/W/J/T	221	NA⁴	
Towing F	140.5	(0+00-20+50)	<	7	0.130	(155,000)	20 000	30/E/C/W/T	(43)	10/E/C/W/T	(8.7)	NA ⁴	4
Iakiway E	112A	(0+00-15+50)	(_	5	(155,000)	20,000	7000	(59)		(6.4)	<u> </u>	ı
Taxiway F	T13A ⁵	0+00-6+62 (0+00-21+70)	Α	7	C-130	70 370 (155,000)	20,000	30/F/C/W/T	27 (60)	10/F/C/W/T	160 (6.3)	NA⁴	4
Taxiway P	T14C	0+00-0+91 (0+00-3+00)	ပ	25 (92)	C-130	70 370 (155,000)	50,000	34/R/C/W/T	21 (46)	7/R/D/W/T	732 (28.8)	345 (13.6)	371 (14.6)
	T15C ⁵	0+91-8+38 (3+00-27+50)	2	2	C-130	70 370 (155,000)	20,000	30/F/C/W/T	29 (63)	11/F/C/W/T	132 (5.2)	NA⁴	4

Values based on correlations between CBR and/or k and the backcalculated subgrade modulus.

(Sheet 2 of 5)

² Determined for the critical aircraft (see Table D1).

³ The allowable gross load is greater than the maximum take-off weight of the critical aircraft.

⁴ Was not calculated because feature was evaluated as a flexible pavement.

Was not careful control of the state of the

Table D3 (Continued)	ontinu	(pa											
				Subgrado		Design	Design Aircraft²				Thec Requir	Theoretical Overlay Requirements, mm (in.)	erlay ım (in.)
		Test Number	Туре	Strength¹ CBR, % or					Allowable Gross			PCC Partial	
Pavement Facility	Feature	or Station m (ft)	Traffic Area	K, kPa/mm (psi/in.)	Aircraft	Weight Kg (lb)	Passes	ACN	Load Mg (kips)	PCN	AC	Bond	PCC No Bond
					-	Fixed-wing Pavements	avements						
Short Taxiway F	T16C	0+00-1+02	၁	11	C-17	263 320	009'9	57/F/B/W/T	60 (133)	3/F/B/W/T	442	NA⁴	₄
Taxiway H	T17C	0+00-2+59	U	13	C-17	263 320 (580,000)	009'9	50/F/A/W/T	263 (580+) ³	55/F/A/W/T	0.0)	NA⁴	4
	T18B	2+85-6+32 (9+35-20+75)	В	6	C-37	41 087 (90,500)	20,000	26/F/B/W/T	27 (60)	16/F/B/W/T	127 (5.0)	NA⁴	4-
	T19B	6+32-6+78 (20+75-22+25)	В	41 (151)	C-37	41 087 (90,500)	20,000	30/R/C/W/T	14 (30)	8/R/C/W/T	554 (21.8)	NA	330 (13.0)
Taxiway J	T20C	0+00-2+21 (0+00-7+25)	O	12	C-17	263 320 (580,000)	009'9	57/F/A/W/T	132 (291)	22/F/A/W/T	175 (6.9)	NA ⁴	2
Taxiway L	T21B	0+00-3+78 (0+00-12+40)	В	10	C-37	41 087 (90,500)	20,000	26/F/B/W/T	32 (71)	20/F/B/W/T	76 (3.0)	NA ⁴	ا م
	T22B	3+78-4+13 (12+40-13+55)	В	37 (136)	C-37	41 087 (90,500)	20,000	30/R/C/W/T	20 (45)	13/R/C/W/T	312 (12.3)	NA	244 (9.6)
	T23B	4+13-5+42 (13+55-17+80)	В		C-37	41 087 (90,500)	20,000	30/R/C/W/T	23 (50)	15/R/C/W/T	320 (12.6)	NA	246 (9.7)
	T24B	4+52-7+14 (17+80-23+42)	В		C-17	263 320 (580,000)	61,000	49/R/C/W/T	78 (172)	11/R/C/W/T	1 013 (39.9)	N A	526 (20.7)
Taxiway M	T25B	0+00-0+82 (0+00-2+68)	В	12	C-37	41 087 (90,500)	20,000	30/R/C/W/T	44 (98)	12/R/C/W/T	429 (16.9)	N A	302 (11.9)
Black Ramp	A1B	1-21	В	39 (144)	C-17	263 320 (580,000)	61,000	49/R/C/W/T	244 (538)	45/R/C/W/T	38 (1.5)	76 (3.0)	150 (5.9)
	A2B	1-5	В	40 (146)	C-17	263 320 (580,000)	61,000	49/R/C/W/T	123 (271)	20/R/C/W/T	483 (19.0)	305 (12.0)	373 (14.7)
Brown Ramp	A3B ⁵	1-7	В	2.8	C-130	70 370 (155,000)	50,000	36/F/D/W/T	10 (22)	2/F/D/W/T	368 (14.5)	NA⁴	4
	A4B	1-12	В	34 (126)	C-130	70 370 (155,000)	20,000	32/R/C/W/T	18 (40)	6/R/C/W/T	820 (32.3)	NA	434 (17.1)
												(St	(Sheet 3 of 5)

¹ Values based on correlations between CBR and/or k and the backcalculated subgrade modulus.

Determined for the critical aircraft (see Table D1).

The allowable gross load is greater than the maximum take-off weight of the critical aircraft.

Was not coloulated because feature was evaluated as a flexible payement.

⁴ Was not calculated because feature was evaluated as a flexible pavement. ⁵ Used LOW (Low Volume Evaluation program) to evaluate pavement.

Table D3 (Continued)	Sontinu	ed)											
				Subgrade		Design	Design Aircraft²		oldewolld		The Requ	Theoretical Overlay Requirements, mm (in.)	rlay 1 (in.)
Pavement		Test Number	Type Traffic	CBR, % or		*4~:0///			Gross			PCC Partial	PCC
Facility	Feature		Area	(psi/in.)	Aircraft	weignt Kg (lb)	Passes	ACN	Mg (kips)	PCN	AC	Bond	No Bond
					F	Fixed-wing Pavements	avements						
Brown Ramp	A5B	1-4	В	36	C-130	70370	20,000	32/R/C/W/T	24 (53)	9/R/C/W/T	432	279	328
	A6B	1-3	В	13	C-130	70 370	50,000	24/F/A/W/T	(39 (85)	12/F/A/W/T	168	NA ⁴	
Yellow Ramp	A7B	1-3	В	12	C-130	70 370 (155,000)	20,000	28/F/B/W/T	(92)	15/F/B/W/T	140	NA⁴	4-
	A8B	1-6	В	31 (113)	C-37	41 087 (90,500)	20,000	30/R/C/W/T	12 (27)	7/R/C/W/T	574 (22.6)	NA⁴	348 (13.7)
	A9B	1-6	В	40 (149)	C-37	41 087 (90,500)	20,000	30/R/C/W/T	25 (56)	17/R/C/W/T	241 (9.5)	Α V	231 (9.1)
	A10B	4	В	28 (103)	C-37	41 087 (90,500)	20,000	30/R/C/W/T	12 (26)	7/R/C/W/T	625 (24.6)	Ą V	351 (13.8)
	A11B	1-5	В	37 (138)	C-37	41 087 (90,500)	20,000	30/R/C/W/T	25, (55)	17/R/C/W/T	254 (10.0)	Α V	236 (9.3)
	A12B	1-18	В	40 (149)	C-37	41 087 (90,500)	20,000	30/R/C/W/T	24 (53)	17/R/C/W/T	277 (10.9)	Α V	231 (9.1)
	A13B						Closed at t	Closed at time of testing					
Apron 1	A14B	1-18	В	47 (175)	C-37	41 087 (90,500)	20,000	30/R/C/W/T	41 (91+) ³	30/R/C/W/T	(0.0)	NA⁴	4
Green Ramp	A15B ⁵	1-16	В	8	C-37	41 087 (90,500)	50,000	28/F/C/W/T	10 (21)	5/F/C/W/T	178 (7.0)	NA ⁴	⁴ -
	A16B ⁵	1-9	В	2	C-37	41 087 (90,500)	50,000	28/F/C/W/T	11 (25)	6/F/C/W/T	170 (6.7)	NA ⁴	⁴
	A17B ⁵	1-16	В	o	C-37	41 087 (90,500)	50,000	27/F/B/W/T	11 (24)	5/F/B/W/T	157 (6.2)	NA⁴	*
	A18B	1-4	В	28 (105)	C-37	41 087 (90,500)	50,000	30/R/C/W/T	8 (18)	4/R/C/W/T	833 (32.8)	394 (15.5)	417 (16.4)

\ \ Values based on correlations between CBR and/or k and the backcalculated subgrade modulus.

(Sheet 4 of 5)

² Determined for the critical aircraft (see Table D1).

The allowable gross load is greater than the maximum take-off weight of the critical aircraft.

⁵ Used LOW (Low Volume Evaluation program) to compute subgrade CBR and used APE (Airfield Pavement Evaluation program) to evaluate pavement. 4 Was not calculated because feature was evaluated as a flexible pavement.

Table D3 (Concluded)	Soncluc	(paj											
				Subgrade Strength ¹		Design	Design Aircraft²		Allowable		The Requ	Theoretical Overlay Requirements, mm (in.)	lay ı (in.)
Pavement Facility	Feature	Test Number or Station m (ft)	Type Traffic Area	CBR, % or K, kPa/mm (psi/in.)	Aircraft	Weight Kg (Ib)	Passes	ACN	Gross Load Mg (kips)	PCN	AC	PCC Partial Bond	PCC No Bond
					<u> </u>	ng	Pavements						
South Holding	A28B	1-10	В	30	C-17	263 320	61,000	49/R/C/W/T	219	40/R/C/W/T	76	147	244
North Holding Apron	A29B	1-10	В	53 (197)	C-17	263 320 (580,000)	61,000	49/R/C/W/T	263 (580+) ³	51/R/C/W/T	0 (0:0)	(0.0)	(0.0)
Apron 2	A30B ⁵	4	В	11	C-37	41 087 (90,500)	20,000	27/F/B/W/T	18 (39)	10/F/B/W/T	91 (3.6)	NÀ⁴	4
					Ä	ng	Pavements						
Rotary-Wing Runway	R22B ⁵	0+00-(0+00-5+50)	В	8	CH-47	22 700 (50,000)	20,000	9/F/B/W/T	23 (50+) ³	10/F/B/W/T	0 (0.0)	NA⁴	4
Rotary-Wing Taxiway	T26B ⁵	4-	В	10	CH-47	22 700 (50,000)	20,000	9/F/B/W/T	23 (50)	9/F/B/W/T	0.0)	NA ⁴	*
Red Ramp	A19B	1-13	В	17	CH-47	22 700 (50,000)	20,000	7/F/A/W/T	23 (50+) ³	17/F/A/W/T	0.0)	NA ⁴	*
	A20B	1-5	В	54 (200)	CH-47	22 700 (50,000)	20,000	10/R/C/W/T	23 (50+) ³	18/R/C/W/T	(0.0)	0(0.0)	0.0)
	A21B	1-6	В	17	CH-47	22 700 (50,000)	20,000	7/F/A/W/T	23 (50+) ³	12/F/A/W/T	(0.0)	NA⁴	⁴ !
White Ramp	A22B	1-15	В	17	CH-47	22 700 (50,000)	20,000	7/F/A/W/T	23 (50+) ³	17/F/A/W/T	0 (0.0)	NA⁴	⁴ !
	A23B	9-1-8	В	45 (165)	CH-47	22 700 (50,000)	20,000	10/R/C/W/T	23 (50+) ³	18/R/C/W/T	(0:0)	0(0:0)	0.0)
	A24B	1-8	В	15	CH-47	22 700 (50,000)	20,000	7/F/A/W/T	23 (50+) ³	11/F/A/W/T	(0.0)	NA ⁴	4-
	A25B	4-1	В	51 (190)	CH-47	22 700 (50,000)	20,000	10/R/C/W/T	23 (50+) ³	15/R/C/W/T	0.0)	0 (0.0)	0.0)
Blue Ramp	A26B	1-16	В	14	CH-47	22 700 (50,000)	20,000	7/F/A/W/T	23 (50+) ³	9/F/A/W/T	0.0)	NA⁴	⁴
	A27B	1-8	В	48 (177)	CH-47	22 700 (50,000)	20,000	10/R/C/W/T	23 (50+) ³	15/R/C/W/T	(0.0)	(0 [.] 0)	0.0)
												(She	(Sheet 5 of 5)

¹ Values based on correlations between CBR and/or k and the backcalculated subgrade modulus.

Determined for the critical aircraft (see Table D1).

3 The allowable gross load is greater than the maximum take off weight of the critical aircraft.

4 Was not calculated because feature was evaluated as a flexible pavement.

Table D4 Summary of Pavement (Classification Numb	ers
Pavement Facility	Controlling Feature	PCN ¹ Code
	Fixed-Wing Pavements	
Runway 15-33	R10A	52/R/B/W/T
Runway 03-21	R21A	8/R/C/W/T
Taxiway K	T4A	31/R/B/W/T
Taxiway K	T6A	28/F/A/W/T
Taxiway G	T7A	57/R/C/W/T
Taxiway A	T8A	59/R/B/W/T
Taxiway B	T9A	12/F/B/W/T
Taxiway C	T10C	20/F/B/W/T
Taxiway D	T11A	7/F/C/W/T
Taxiway E	T12A	10/F/C/W/T
Taxiway F	T13A	10/F/C/W/T
Taxiway P	T14A	7/R/D/W/T
Taxiway Short F	T16B	3/F/B/W/T
Taxiway H	T19B	8/R/C/W/T
Taxiway J	T20C	22/F/A/W/T
Taxiway L	T24B	11/R/C/W/T
Taxiway M	T25B	12/R/C/W/T
Black Ramp2	A1B	45/R/C/W/T
Brown Ramp	A3B	2/F/D/W/T
Yellow Ramp	A10B	7/R/C/W/T
Apron 1	A14B	30/R/C/W/T
Green Ramp	A18B	4/R/C/W/T
South Holding Apron	A28B	40/R/C/W/T
North Holding Apron	A29B	51/R/C/W/T
Apron 2	A30B	10/F/B/W/T
	Fixed-Wing Pavements	
Rotary-wing Runway	R22B	10/F/B/W/T
Rotary-wing Runway Access TW	T26B	9/F/B/W/T
Red Ramp	A21B	12/F/A/W/T
White Ramp	A24B	11/F/A/W/T
Blue Ramp	A26B	9/F/A/W/T

¹ Table D5 describes the components of the PCN code.
² Aircraft do not operate on A2B, therefore A2B is not the controlling feature of the Black Ramp.

Table D5	i e-Part Cod	la.			
PCN	Pavement Type	Subgrade Strength ¹	Tire Pressure2	Method of PCN Determination	
Numerical	R - rigid	А	W	T - technical evaluation	
value	F - flexible	В	x	U - using aircraft	
		С	Υ		
		D	Z		
¹ Code	Category		Flexible Pavement CBR, %	Rigid Pavement K, kPa/mm, (psi/in.)	
Α	High		⟨ 13	〈 108 (400)	
В	Medium		13 > CBR (8	108 > K < 54 (400 > K < 200)	
С	Low		8 > CBR 〈 4	54 > K (27 (200 > K (100)	
D	Ultra-low		< 4	< 27 (< 100)	
² Code	<u>Category</u>		Tire Pressure, MPa (psi)		
W	High		No limit		
x	Medium		1.0 - 1.5 (146 - 217)		
Y	Low		0.51 - 1.0 (73 - 145)		
Z	Ultra-low		0 - 0.5 (0 - 72)		

Appendix E Micro PAVER Output Summary

Network ID - Lawson

Branch Name - RUNWAY 15-33 Slab Length - 12.50 LF

Branch Number - R1A Slab Width - 12.50 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 320 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 97 RATING = EXCELLENT TOTAL NUMBER OF SAMPLE UNITS = 24 8 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 3.4% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE 65 JT SEAL DAM LOW 40 (SLABS)
73 SHRINKAGE CR N/A 10 (SLABS)
75 CORNER SPALL LOW 10 (SLABS)
75 CORNER SPALL MEDIUM 2 (SLABS)
75 CORNER SPALL HIGH 2 (SLABS) 12.50 3.13 3.13 2.00 0.87 1.18 1.00 0.80 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 33.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 67.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - RUNWAY 15-33 Slab Length - 12.50 LF

Pranch Number - R2A Slab Width - 12.50 LF Section Number - 1 Family - DEFAULT Number of Slabs -Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 94 RATING = EXCELLENT TOTAL NUMBER OF SAMPLE UNITS = 24 13 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 13 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 13.9% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE

 62 CORNER BREAK
 LOW
 20 (SLABS)
 3.08
 2.54

 62 CORNER BREAK
 MEDIUM
 12 (SLABS)
 1.92
 2.88

 63 LINEAR CR
 LOW
 3 (SLABS)
 1.00
 1.00

 63 LINEAR CR
 MEDIUM
 3 (SLABS)
 1.00
 1.00

 65 JT SEAL DAM
 LOW
 148 (SLABS)
 23.08
 2.00

 66 SMALL PATCH
 LOW
 2 (SLABS)
 1.00
 0.15

 72 SHATTERED SLAB LOW
 3 (SLABS)
 1.00
 2.50

 73 SHRINKAGE CR
 N/A
 5 (SLABS)
 1.00
 0.60

 75 CORNER SPALL
 HIGH
 2 (SLABS)
 1.00
 1.20

 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = 72.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 14.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 14.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - RUNWAY 15-33 Section Length - 2616.00 LF

Branch Number - R3C Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 130800.00 SF ______ Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 80 RATING = VERY GOOD TOTAL NUMBER OF SAMPLE UNITS = 26 NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 10
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 1.4% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** 48 L & T CR LOW 7672.00 (LF) 5.87 16.55 48 L & T CR MEDIUM 1229.00 (LF) 0.94 10.93 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. OTHER

Network ID - Lawson

Network ID - Lawson

Branch Name - RUNWAY 15-33 Section Length - 2616.00 LF

Branch Number - R4C Section Width - 100.00 LF

Section Number - 1 Family - DEFAULT Section Area - 261600.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 82 RATING = Very GOOD

TOTAL NUMBER OF SAMPLE UNITS = 52

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF -RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.

STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 4.9%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
48 L & T CR	LOW	12286.00 (LF)	4.70	14.11
48 L & T CR	MEDIUM	2054.00 (LF)	0.79	10.10

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

RELATED DISTRESSES = 0.00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. OTHER RELATED DISTRESSES = 0.00 PERCENT DEDUCT VALUES. Network ID - Lawson

Network ID - Lawson

Branch Name - RUNWAY 15-33 Section Length - 300.00 LF

Branch Number - R5C Section Width - 150.00 LF

Section Number - 1 Family - DEFAULT Section Area - 45000.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 82 RATING = VERY GOOD

TOTAL NUMBER OF SAMPLE UNITS = 9 NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 5
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 2.8%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE 48 L & T CR LOW 3121.00 (LF) 6.94 18.54

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. OTHER

Network ID - Lawson

Branch Name - RUNWAY 15-33 Section Length - 2260.00 LF

Branch Number - R6C Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 113000.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 75 RATING = VERY GOOD

TOTAL NUMBER OF SAMPLE UNITS = 23

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMIM OF 5 STATES RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.

STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 1.4%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
48 L & T CR	LOW	7949.00 (LF)	7.04	18.72
48 L & T CR	MEDIUM	2382.00 (LF)	2.11	16.15

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. Network ID - Lawson

Network ID - Lawson

Branch Name - RUNWAY 15-33 Section Length - 2260.00 LF

Branch Number - R7C Section Width - 100.00 LF

Section Number - 1 Family - DEFAULT Section Area - 226000.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 82 RATING = VERY GOOD

TOTAL NUMBER OF SAMPLE UNITS = 46

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 3.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

 DISTRESS-TYPE
 SEVERITY
 QUANTITY
 DENSITY %
 DEDUCT VA

 48 L & T CR
 LOW
 11725.00 (LF)
 5.19
 15.17

 48 L & T CR
 MEDIUM
 1303.00 (LF)
 0.58
 8.83
 DEDUCT VALUE

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. OTHER

Network ID - Lawson

Network ID - Lawson

Branch Name - RUNWAY 15-33 Section Length - 1024.00 LF

Branch Number - R8C Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 51200.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 77 RATING = VERY GOOD

TOTAL NUMBER OF SAMPLE UNITS = 10

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 7
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 2.1%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
48 L & T CR	LOW	4583.00 (LF)	8.95	21.80
48 L & T CR	MEDIUM	256.00 (LF)	0.50	8.29

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - RUNWAY 15-33 Section Length - 1024.00 LF

Pranch Number - R9C Section Width - 100.00 LF

- 102400.00 SF Section Number - 1 Family - DEFAULT Section Area - 102400.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 83 RATING = VERY GOOD

TOTAL NUMBER OF SAMPLE UNITS = 20 8 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = Ω RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 1.5%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE 48 L & T CR LOW 5564.00 (LF) 5.43 48 L & T CR MEDIUM 256.00 (LF) 0.25 15.68 5.86

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. Network ID - Lawson

Branch Name - RUNWAY 15-33 Slab Length - 25.00 LF

Branch Number - R10A Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 80 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 80 RATING = VERY GOOD TOTAL NUMBER OF SAMPLE UNITS = 20 8 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 5.8% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE

 65 JT SEAL DAM
 MEDIUM
 60 (SLABS)
 75.00

 70 SCALING
 LOW
 23 (SLABS)
 28.33

 74 JOINT SPALL
 LOW
 3 (SLABS)
 3.33

 74 JOINT SPALL
 MEDIUM
 3 (SLABS)
 3.33

 75 CORNER SPALL
 LOW
 4 (SLABS)
 5.00

 75 CORNER SPALL
 MEDIUM
 1 (SLABS)
 1.67

 7.00 8.87 1.79 3.39 1.83 1.11 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 29.00 PERCENT DEDUCT VALUES.

OTHER RELATED DISTRESSES = 71.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - RUNWAY 15-33 Slab Length - 25.00 LF

Branch Number - R11A Slab Width - 25.00 LF

Number of Slabs - 76 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 79 RATING = VERY GOOD TOTAL NUMBER OF SAMPLE UNITS = 4 NUMBER OF RANDOM SAMPLE UNITS SURVEYED 4 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = RECOMMENDED MINIMUM OF 4 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 7.6% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE 63 LINEAR CR LOW 2 (SLABS) 2.63
65 JT SEAL DAM LOW 48 (SLABS) 60.53
65 JT SEAL DAM MEDIUM 32 (SLABS) 39.47
70 SCALING LOW 22 (SLABS) 27.63
74 JOINT SPALL MEDIUM 1 (SLABS) 1.32
75 JOINT SPALL HIGH 1 (SLABS) 1.32
75 CORNER SPALL HIGH 2 (SLABS) 2.63 2.63 2.68 2.00 7.00 8.73 1.85 4.22 3.88 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = 9.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 30.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 61.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - RUNWAY 15-33 Slab Length - 25.00 LF

Branch Number - R12A Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 60 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 86 RATING = EXCELLENT TOTAL NUMBER OF SAMPLE UNITS = 3 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF RECOMMENDED MINIMUM OF 13 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 1.82% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE

 65 JT SEAL DAM
 MEDIUM
 60 (SLABS)
 100.00

 70 SCALING
 LOW
 12 (SLABS)
 20.00

 74 JOINT SPALL
 LOW
 1 (SLABS)
 1.67

 75 CORNER SPALL
 MEDIUM
 1 (SLABS)
 1.67

 7.00 6.99 1.36 1.11 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 43.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 57.00 PERCENT DEDUCT VALUES.

Network ID - WESGP

Branch Name - RUNWAY 15-33 Slab Length - 25.00 LF

Branch Number - R13A Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 45

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 88 RATING = EXCELLENT

TOTAL NUMBER OF SAMPLE UNITS = 3 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 0

RECOMMENDED MINIMUM OF 3 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 8.8%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE 65 JT SEAL DAM MEDIUM 45 (SLABS) 100.00 7.00 70 SCALING LOW 8 (SLABS) 18.18 6.52

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 52.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 48.00 PERCENT DEDUCT VALUES.

Network ID - Lawson
Branch Name - RUNWAY 3-21 Section Length - 300.00 LF
Branch Number - R14A Section Width - 150.00 LF
Section Number - 1 Family - DEFAULT Section Area - 45000.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 29 RATING = POOR

TOTAL NUMBER OF SAMPLE UNITS = 9

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 6

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 6 RANDOM SAMPLE UNITS TO BE SURVEYED.

STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 11.3%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR 43 BLOCK CR 47 JT REFLECT CR 47 JT REFLECT CR 52 WEATH/RAVEL	LOW MEDIUM LOW MEDIUM LOW	26222.00 (SF) 11238.00 (SF) 749.00 (LF) 9368.00 (LF) 37461.00 (SF)	24.97 1.67 20.82	29.92 31.85 4.78 47.09 24.64
52 WEATH/RAVEL	MEDIUM	7492.00 (SF)	16.65	25.95

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - RUNWAY 3-21 Section Length - 700.00 LF

Branch Number - R15A Section Width - 150.00 LF

Section Number - 1 Family - DEFAULT Section Area - 105000.00 SF Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 43 RATING = FAIR TOTAL NUMBER OF SAMPLE UNITS = 21 9 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 5.9% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE

 43 BLOCK CR
 LOW
 22144.00 (SF)
 21.09

 43 BLOCK CR
 MEDIUM
 82748.00 (SF)
 78.81

 52 WEATH/RAVEL
 LOW
 105000.00 (SF)
 100.00

 21.60 48.43 26.34 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. OTHER

Network ID - Lawson

Branch Name - RUNWAY 3-21 Section Length - 800.00 LF

Branch Number - R16C Section Width - 150.00 LF

Section Number - 1 Family - DEFAULT Section Area - 120000.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 44 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 24 NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 9
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF FROM RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 5.5%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	13319.00 (SF)	11.00	17.59
43 BLOCK CR	MEDIUM	106552.00 (SF)	89.00	50.67
52 WEATH/RAVEL	LOW	120000.00 (SF)	100.00	26.34

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - RUNWAY 3-21 Section Length - 2900.00 LF

Branch Number - R17C Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 145000.00 SF Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 40 RATING = POOR TOTAL NUMBER OF SAMPLE UNITS = 29 11 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 5.9% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VA 41 ALLIGATOR CR LOW 1317.00 (SF) 0.91 19.60 43 BLOCK CR MEDIUM 131416.00 (SF) 90.63 51.06 52 WEATH/RAVEL LOW 131679.00 (SF) 90.81 25.45 52 WEATH/RAVEL MEDIUM 12114.00 (SF) 8.35 19.09 1.0W 527.00 (SF) 0.36 11.58 DEDUCT VALUE *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = 24.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 76.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - RUNWAY 3-21 Section Length - 2900.00 LF

Branch Number - R18C Section Width - 100.00 LF

Section Number - 1 Family - DEFAULT Section Area - 290000.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 43 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 58

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 15
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF FROM RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.

STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 4.4%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	53111.00 (SF)	18.31	20.65
43 BLOCK CR	MEDIUM	236584.00 (SF)	81.58	49.07
52 WEATH/RAVEL	LOW	290000.00 (SF)	100.00	26.34

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - RUNWAY 3-21 Section Length - 200.00 LF

Branch Number - R19C Section Width - 150.00 LF

Section Number - 1 Family - DEFAULT Section Area - 30000.00 SF

Inspection Date: JUN/26/2006

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 42 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 6 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 5
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 1.4%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

QUANTITY DENSITY % DEDUCT VALUE 30000.00 (SF) 100.00 52.99 30000.00 (SF) 100.00 26.34 DISTRESS-TYPE SEVERITY
43 BLOCK CR MEDIUM 52 WEATH/RAVEL LOW

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson
Branch Name - RUNWAY 3-21 Section Length - 700.00 LF
Branch Number - R20A Section Width - 150.00 LF
Section Number - 1 Family - DEFAULT Section Area - 105000.00 SF

Inspection Date: JUN/26/2001
Riding Quality: Safety: Drainage Cond.:
Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 42 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 21
NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 9
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.
STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 0.9%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	2914.00 (SF)	2.77	11.17
43 BLOCK CR	MEDIUM	101979.00 (SF)	97.12	52.42
52 WEATH/RAVEL	LOW	105000.00 (SF)	100.00	26.34

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - RUNWAY 3-21 Section Length - 300.00 LF

Branch Number - R21A Section Width - 150.00 LF

Section Number - 1 Family - DEFAULT Section Area - 45000.00 SF Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 31 RATING = POOR TOTAL NUMBER OF SAMPLE UNITS = 9 NUMBER OF RANDOM SAMPLE UNITS SURVEYED 6 0 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = RECOMMENDED MINIMUM OF 8 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 20.6% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE

 41 ALLIGATOR CR
 MEDIUM
 749.00 (SF)
 1.66

 41 ALLIGATOR CR
 HIGH
 1124.00 (SF)
 2.50

 43 BLOCK CR
 LOW
 8990.00 (SF)
 19.98

 43 BLOCK CR
 MEDIUM
 6368.00 (SF)
 14.15

 47 JT REFLECT CR
 MEDIUM
 7044.00 (LF)
 15.66

 48 L & T CR
 MEDIUM
 44.96 (LF)
 0.10

 52 WEATH/RAVEL
 LOW
 45000.00 (SF)
 100.00

 53 RUTTING
 MEDIUM
 749.00 (SF)
 1.66

 53 RUTTING
 HIGH
 1124.00 (SF)
 2.50

 34.37 47.65 21.23 26.26 43.48 4.00 26.34 27.79 42.76 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = 56.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 44.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - R/W RUNWAY Section Length - 550.00 LF

Branch Number - R22B Section Width - 75.00 LF

Section Number - 1 Family - DEFAULT Section Area - 41250.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 64 RATING = GOOD

TOTAL NUMBER OF SAMPLE UNITS = 5 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF THE SURVEYED = 0 NUMBER OF RANDOM SAMPLE UNITS SURVEYED

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 0.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE 43 BLOCK CR LOW 41250.00 (SF) 100.00 35.58

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

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Network ID
Network ID - Lawson

Branch Name - Taxiway K Slab Length - 25.00 LF

Branch Number - T1A Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 379
                    - Lawson
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  Inspection Date: JUN/26/2001
  Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
  PCI OF SECTION = 79
                                                                  RATING = VERY GOOD
  TOTAL NUMBER OF SAMPLE UNITS = 18
  NUMBER OF RANDOM SAMPLE UNITS SURVEYED =
  NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF
  RECOMMENDED MINIMUM OF 8 RANDOM SAMPLE UNITS TO BE SURVEYED.
  STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 10.0%
            *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
  DISTRESS-TYPE SEVERITY
                                           QUANTITY
                                                               DENSITY % DEDUCT VALUE
  63 LINEAR CR LOW 1 (SLABS) 1.00
63 LINEAR CR MEDIUM 1 (SLABS) 1.00
65 JT SEAL DAM HIGH 379 (SLABS) 100.00
70 SCALING LOW 41 (SLABS) 11.11
74 JOINT SPALL LOW 15 (SLABS) 3.97
                                                                              1.00
12.00
4.39
1.92
2.86
                                         41 (SLABS)
15 (SLABS)
9 (SLABS)
3 (SLABS)
3 (SLABS)
  70 SCALING
74 JOINT SPALL LOW
74 JOINT SPALL MEDIUM
75 CPALL HIGH
                                                                3.97
2.38
1.00
                                                                                    2.86
  75 JOINT SPALL HIGH
                                                                                    3.00
                                                                  1.00
                                                                                   3.30
   75 CORNER SPALL
                         LOW
  75 CORNER SPALL LOW
75 CORNER SPALL MEDIUM
                                          10 (SLABS)
   75 CORNER SPALL HIGH
                                            1 (SLABS)
                                                                  1.00
                                                                                    1.20
        *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
  LOAD RELATED DISTRESSES = 7.00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 41.00 PERCENT DEDUCT VALUES. OTHER RELATED DISTRESSES = 52.00 PERCENT DEDUCT VALUES.
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Network ID - Lawson

Branch Name - Taxiway K Slab Length - 25.00 LF

Branch Number - T2A Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 252
  Inspection Date: JUN/26/2001
  Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
  PCI OF SECTION = 71
                                                                        RATING = VERY GOOD
  TOTAL NUMBER OF SAMPLE UNITS = 12
                                                                     9
  NUMBER OF RANDOM SAMPLE UNITS SURVEYED
  NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED =
  RECOMMENDED MINIMUM OF 7 RANDOM SAMPLE UNITS TO BE SURVEYED.
  STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 11.4%
            *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
  DISTRESS-TYPE SEVERITY
  LOW 32 (SLABS) 12.70
63 LINEAR CR MEDIUM 21 (SLABS) 8.47
65 JT SEAL DAM HIGH 252 (SLABS) 100.00
66 SMALL PATCH LOW 1 (SLABS) 1.00
74 JOINT SPALL LOW 8 (STABS)
75 CORNER SPALL LOW
                                              QUANTITY
                                                                   DENSITY % DEDUCT VALUE
                                                                                            10.22
                                                                                              16.73
                                                                                            12.00
                                             1 (SLABS)
8 (SLABS)
1 (SLABS)
4 (SLABS)
  74 JOINT SPALL LOW
75 CORNER SPALL LOW
75 CORNER SPALL MEDIUM
                                                                                             0.15
1.76
                                                                        1.00
1.59
                                                                                              0.30
                                                                                              1.07
        *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
  LOAD RELATED DISTRESSES = 64.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 28.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 8.00 PERCENT DEDUCT VALUES.
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Network ID - Lawson

Branch Name - Taxiway K Slab Length - 25.00 LF

Branch Number - T3A Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 42
   Inspection Date: JUN/26/2001
  Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
  PCI OF SECTION = 72
                                                                          RATING = VERY GOOD
   TOTAL NUMBER OF SAMPLE UNITS = 2
  NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 0
   RECOMMENDED MINIMUM OF 2 RANDOM SAMPLE UNITS TO BE SURVEYED.
   STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 15.0%
             *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
  DISTRESS-TYPE SEVERITY
                                               QUANTITY
                                                                    DENSITY % DEDUCT VALUE
  63 LINEAR CR LOW 2 (SLABS) 4.76
63 LINEAR CR MEDIUM 3 (SLABS) 7.14
65 JT SEAL DAM HIGH 42 (SLABS) 100.00
74 JOINT SPALL LOW 1 (SLABS) 2.38
75 CORNER SPALL LOW 1 (SLABS) 2.38
75 CORNER SPALL MEDIUM 2 (SLABS) 4.76
                                                                                                4.57
                                                                                               14.92
                                                                                             12.00
                                                                                              1.60
0.95
                                                                                               3.44
         *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
  LOAD RELATED DISTRESSES = 52.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 32.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 16.00 PERCENT DEDUCT VALUES.
```

```
Network ID - Lawson

Branch Name - Taxiway K Slab Length - 25.00 LF

Branch Number - T4A Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 147
Inspection Date: JUN/26/2001
  Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
   PCI OF SECTION = 82
                                                                           RATING = VERY GOOD
   TOTAL NUMBER OF SAMPLE UNITS = 7
   NUMBER OF RANDOM SAMPLE UNITS SURVEYED
                                                                        6
0
   NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED =
   RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.
   STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 5.9%
             *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
                                              QUANTITY
   DISTRESS-TYPE SEVERITY
                                                                      DENSITY % DEDUCT VALUE

      63 LINEAR CR
      LOW
      5 (SLABS)
      3.17
      3.16

      63 LINEAR CR
      MEDIUM
      2 (SLABS)
      1.59
      4.06

      65 JT SEAL DAM
      HIGH
      147 (SLABS)
      100.00
      12.0

      73 SHRINKAGE CR
      N/A
      1 (SLABS)
      1.00
      0.60

      74 JOINT SPALL
      MEDIUM
      1 (SLABS)
      1.00
      1.00

   75 CORNER SPALL LOW
                                                  4 (SLABS)
                                                                           2.38
                                                                                              0.95
         *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
   LOAD RELATED DISTRESSES = 33.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 55.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 12.00 PERCENT DEDUCT VALUES.
```

Network ID - Lawson

Branch Name - Taxiway K Slab Length - 25.00 LF

Branch Number - T5A Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 42 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 86 RATING = EXCELLENT TOTAL NUMBER OF SAMPLE UNITS = 2 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 0 THE SURVEYED = 0 RECOMMENDED MINIMUM OF 2 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 15.0% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE 65 JT SEAL DAM HIGH 42 (SLABS) 100.00 12.00 74 JOINT SPALL LOW 1 (SLABS) 2.38 1.60 75 CORNER SPALL LOW 1 (SLABS) 2.38 0.95 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 82.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 18.00 PERCENT DEDUCT VALUES.

Network ID - Lawson
Branch Name - Taxiway K

Branch Name - Taxiway K Section Length - 600.00 LF
Branch Number - T6A Section Width - 75.00 LF
Section Number - 1 Family - DEFAULT Section Area - 45000.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 41 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 6

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 5
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 NUMBER OF RANDOM SAMPLE UNITS SURVEYED

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 8.8%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTI	TY	DENSITY %	DEDUCT VALUE
42 BLEEDING 43 BLOCK CR 48 L & T CR 48 L & T CR 49 OIL SPILLAGE 50 PATCHING	N/A MEDIUM LOW MEDIUM N/A LOW	1762.00 19240.00 1151.00 63.00 2.00 297.00	(SF) (SF) (LF) (LF) (SF) (SF)	3.92 42.76 2.56 0.14 0.10 0.66	20.10 38.59 8.89 4.25 2.00 2.80
52 WEATH/RAVEL	LOW	45000.00	(SF)	100.00	26.34

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - LAWSON

Branch Name - Taxiway G Slab Length - 25.00 LF

Branch Number - T7A Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 227 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 83 RATING = VERY GOOD TOTAL NUMBER OF SAMPLE UNITS = 10 8 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 6.5% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE

 62 CORNER BREAK
 LOW
 1 (SLABS)
 1.00

 65 JT SEAL DAM
 HIGH
 216 (SLABS)
 100.00

 74 JOINT SPALL
 LOW
 8 (SLABS)
 3.57

 75 JOINT SPALL
 HIGH
 4 (SLABS)
 1.79

 75 CORNER SPALL
 LOW
 1 (SLABS)
 1.00

 75 CORNER SPALL
 HIGH
 1 (SLABS)
 1.00

 0.70 12.00 1.84 5.83 1.20 3.00 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = 3.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 55.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 42.00 PERCENT DEDUCT VALUES.

```
Network ID - Lawson
Branch Name - Taxiway A
                                                                  Slab Length - 25.00 LF
Slab Width - 25.00 LF
Branch Number - T8A
Section Number - 1 Family - DEFAULT Number of Slabs -
                                                                                                      384
  Inspection Date: JUN/26/2001
  Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
  PCI OF SECTION = 75
                                                                               RATING = VERY GOOD
   TOTAL NUMBER OF SAMPLE UNITS = 18
                                                                            12
   NUMBER OF RANDOM SAMPLE UNITS SURVEYED
   NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED =
                                                                             0
   RECOMMENDED MINIMUM OF 15 RANDOM SAMPLE UNITS TO BE SURVEYED.
   STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 24.0%
              *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
                                                  QUANTITY
  DISTRESS-TYPE SEVERITY
                                                                          DENSITY % DEDUCT VALUE
  62 CORNER BREAK LOW 5 (SLABS) 1.19
63 LINEAR CR LOW 2 (SLABS) 1.00
65 JT SEAL DAM HIGH 384 (SLABS) 100.00
66 SMALL PATCH LOW 2 (SLABS) 1.00
66 SMALL PATCH MEDIUM 3 (SLABS) 1.00
66 SMALL PATCH HIGH 3 (SLABS) 1.00
72 SHATTERED SLAB LOW 2 (SLABS) 1.00
74 JOINT SPALL LOW 15 (SLABS) 3.97
74 JOINT SPALL MEDIUM 9 (SLABS) 2.38
75 JOINT SPALL HIGH 2 (SLABS) 1.00
75 CORNER SPALL LOW 9 (SLABS) 2.38
75 CORNER SPALL MEDIUM 2 (SLABS) 1.00
75 CORNER SPALL MEDIUM 2 (SLABS) 1.00
75 CORNER SPALL HIGH 2 (SLABS) 1.00
                                                                                                    1.15
                                                                                                      1.00
                                                                                               12.00
                                                                                                  0.15
0.60
                                                                                                   2.00
                                                                                                    2.50
                                                                                                   2.86
                                                                                                  3.00
                                                                                                   0.80
                                                                                                     1.20
        *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
  LOAD RELATED DISTRESSES = 15.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 40.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 45.00 PERCENT DEDUCT VALUES.
```

Network ID - Lawson
Branch Name - Taxiway B Section Length - 530.00 LF
Branch Number - T9A Section Width - 75.00 LF
Section Number - 1 Family - DEFAULT Section Area - 39750.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

RATING = POOR

PCI OF SECTION = 39

TOTAL NUMBER OF SAMPLE UNITS = 5

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 5

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.

STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 1.5%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	MEDIUM	39750.00 (SF)		53.00
49 OIL SPILLAGE 52 WEATH/RAVEL	N/A LOW	229.00 (SF) 39750.00 (SF)		3.13 26.34

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - Taxiway C Section Length - 525.00 LF

Branch Number - T10C Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 26250.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 30 RATING = POOR

TOTAL NUMBER OF SAMPLE UNITS = 5

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF FRANCE NUMBER OF RANDOM SAMPLE UNITS SURVEYED

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 16.5%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
41 ALLIGATOR CR	HIGH	330.00 (SF)	1.20	38.23
43 BLOCK CR	MEDIUM	13797.00 (SF)	48.75	40.85
43 BLOCK CR	HIGH	13111.00 (SF)	49.95	64.93

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - Taxiway D Section Length - 2025.00 LF

Branch Number - T11A Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 102500.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 33 RATING = POOR

TOTAL NUMBER OF SAMPLE UNITS = 20 NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 9
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF A DECEMBER OF THE SURVEYED AND THE SURVEYED AN RECOMMENDED MINIMUM OF 95 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 9.9%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYP	E SEVERITY	QUANTII	'Y	DENSITY 9	DEDUCT VALUE
43 BLOCK CR	LOW	6660.00	(SF)	6.66	14.91
43 BLOCK CR	MEDIUM	78805.00	(SF)	78.81	48.43
43 BLOCK CR	HIGH	14429.00	(SF)	14.43	46.26
52 WEATH/RAV	EL LOW	100000.00	(SF)	100.00	26.34

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

TOTAL NUMBER OF SAMPLE UNITS = 7 NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 7 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 0.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE
43 BLOCK CR MEDIUM 75000.00 (SF) 100.00 52.99

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson Branch Name - Taxiway F Section Length - 2100.00 LF Section Width - 50.00 LF Branch Number - T13A Section Number - 1 Family - DEFAULT Section Area - 105000.00 SF Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 7 RATING = FAILED TOTAL NUMBER OF SAMPLE UNITS = 21 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = Ω RECOMMENDED MINIMUM OF 11 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 11.8% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE

 41 ALLIGATOR CR
 LOW
 2564.00 (SF)
 2.44

 41 ALLIGATOR CR
 MEDIUM
 3739.00 (SF)
 3.56

 41 ALLIGATOR CR
 HIGH
 15746.00 (SF)
 15.00

 43 BLOCK CR
 LOW
 72996.00 (SF)
 69.52

 53 RUTTING
 LOW
 8857.00 (SF)
 8.44

 53 RUTTING
 MEDIUM
 4895.00 (SF)
 4.66

 29.05 43.03 77.82 43 BLOCK CR LOW 72996.00 (SF)
53 RUTTING LOW 8857.00 (SF)
53 RUTTING MEDIUM 4895.00 (SF)
53 RUTTING HIGH 10443.00 (SF) 31.66 27.11 35.85 9.95 60.76 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = 90.00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 10.00 PERCENT DEDUCT VALUES.

RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

```
Network ID - Lawson

Branch Name - Taxiway P Slab Length - 15.00 LF

Branch Number - T14C Slab Width - 10.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 100
Inspection Date: JUN/26/2001
  Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
   PCI OF SECTION = 44
                                                                              RATING = FAIR
   TOTAL NUMBER OF SAMPLE UNITS = 15
                                                                           11
   NUMBER OF RANDOM SAMPLE UNITS SURVEYED
   NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED =
                                                                             0
   RECOMMENDED MINIMUM OF 12 RANDOM SAMPLE UNITS TO BE SURVEYED.
   STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 21.5%
              *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
   DISTRESS-TYPE SEVERITY
                                                  QUANTITY DENSITY % DEDUCT VALUE
  62 CORNER BREAK LOW 6 (SLABS) 6.00
62 CORNER BREAK MEDIUM 5 (SLABS) 5.00
62 CORNER BREAK HIGH 11 (SLABS) 11.00
63 LINEAR CR LOW 9 (SLABS) 9.00
63 LINEAR CR MEDIUM 5 (SLABS) 5.00
63 LINEAR CR HIGH 1 (SLABS) 1.00
65 JT SEAL DAM LOW 9 (SLABS) 9.00
65 JT SEAL DAM HIGH 91 (SLABS) 9.00
72 SHATTERED SLAB LOW 2 (SLABS) 91.00
72 SHATTERED SLAB MEDIUM 1 (SLABS) 1.00
73 SHATTERED SLAB HIGH 3 (SLABS) 3.00
74 JOINT SPALL LOW 1 (SLABS) 1.00
75 CORNER SPALL LOW 1 (SLABS) 1.00
                                                                                                   4.53
                                                                                                    8.60
                                                                                                22.98
                                                                                                    7.63
                                                                                                12.37
                                                                                                  3.50
                                                                                                    2.00
                                                                                                12.00
                                                                                                  5.63
                                                                                                    5.00
                                                                                                 24.78
                                                                                                    0.90
                                                                                                    0.60
                                                                                                  0.30
         *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
   LOAD RELATED DISTRESSES = 85.00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 13.00 PERCENT DEDUCT VALUES. OTHER RELATED DISTRESSES = 2.00 PERCENT DEDUCT VALUES.
```

Network ID - Lawson

Branch Name - Taxiway P Section Length - 2300.00 LF

Branch Number - T15C Section Width - 75.00 LF

Section Number - 1 Family - DEFAULT Section Area - 172500.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 26 RATING = POOR

TOTAL NUMBER OF SAMPLE UNITS = 24

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 10
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 14 Provided BY 11 Provided BY 11 Provided BY 12 Provided

RECOMMENDED MINIMUM OF 14 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 14.4%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DIS	STRESS-TYPE	SEVERITY	QUANTI	ľΥ	DENSITY %	DEDUCT VALUE
41	ALLIGATOR CR	MEDIUM	6743.00	(SF)	4.99	47.24
43	BLOCK CR	MEDIUM	71475.00	(SF)	52.94	41.74
43	BLOCK CR	HIGH	47200.00	(SF)	34.96	59.35
52	WEATH/RAVEL	LOW	135000.00	(SF)	100.00	26.34
53	RUTTING	LOW	9440.00	(SF)	6.99	25.80
53	RUTTING	MEDIUM	2697.00	(SF)	2.00	29.10

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - Short Taxiway F Section Length - 325.00 LF

Branch Number - T16C Section Width - 75.00 LF

Section Number - 1 Family - DEFAULT Section Area - 24375.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 34 RATING = POOR

TOTAL NUMBER OF SAMPLE UNITS = 3

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 2 PRICE RECOMMENDED MINIMUM OF 3 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 12.2%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
41 ALLIGATOR CR	MEDIUM		8.31	53.77
43 BLOCK CR	LOW		F) 0.88	7.54
43 BLOCK CR	MEDIUM		32.47	34.95
48 L & T CR	LOW		F) 2.77	9.44
48 L & T CR	MEDIUM		F) 0.47	8.04
52 WEATH/RAVEL	MEDIUM		F) 7.33	18.02
52 WEATH/RAVEL	HIGH		33.33	64.51
53 RUTTING	LOW		F) 5.91	24.69
53 RUTTING	MEDIUM	584.00 (S	SF) 2.40	30.46

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - Taxiway H Section Length - 850.00 LF

Branch Number - T17C Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 42500.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 46 RATING = Fair

TOTAL NUMBER OF SAMPLE UNITS = 8

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 7

RECOMMENDED MINIMUM OF 7 PRINCE

RECOMMENDED MINIMUM OF 7 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 26.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTIT	'Y	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	15223.00	(SF)	35.82	25.59
43 BLOCK CR	MEDIUM	14373.00	(SF)	33.82	35.46
48 L & T CR	LOW	455.00	(LF)	1.07	5.10
48 L & T CR	MEDIUM	55.00	(LF)	0.13	4.11
49 OIL SPILLAGE	N/A	4.00	(SF)	0.10	2.00
52 WEATH/RAVEL	LOW	12130.00	(SF)	28.54	16.05
52 WEATH/RAVEL	MEDIUM	16254.00	(SF)	38.25	37.51

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - Taxiway H Section Length - 1140.00 LF

Branch Number - T18B Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 57000.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 55 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 10 NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 8
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF FROM RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 3.4%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	34087.00 (SF)	64.93	30.98
43 BLOCK CR	MEDIUM	18355.00 (SF)	34.96	35.88
52 WEATH/RAVEL	LOW	262.00 (SF)	0.50	1.77

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson
Branch Name - Taxiway H Section Length - 150.00 LF
Branch Number - T19B Section Width - 50.00 LF
Section Number - 1 Family - DEFAULT Section Area - 7500.00 SF

Inspection Date: JUN/26/2001
Riding Quality: Safety: Drainage Cond.:
Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 47 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 1
NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 1 RANDOM SAMPLE UNITS TO BE SURVEYED.
STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 0.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE
43 BLOCK CR LOW 75000.00 (SF) 100.00 53.01

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - Taxiway J Section Length - 725.00 LF

Branch Number - T20C Section Width - 75.00 LF

Section Number - 1 Family - DEFAULT Section Area - 54375.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 49 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 7 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF FRANCE NUMBER OF RANDOM SAMPLE UNITS SURVEYED

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 14.5%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	MEDIUM	37758.00 (SF)	71.92	46.79
48 L & T CR	LOW	664.00 (LF)	1.27	5.54
48 L & T CR	MEDIUM	262.00 (LF)	0.50	8.29
52 WEATH/RAVEL	LOW	37756.00 (SF)	71.92	23.33

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - Taxiway L Section Length - 1240.00 LF

Branch Number - T21B Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 62000.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 44 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 12

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 10

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 7 RANDOM SAMPLE UNITS TO BE SURVEYED.

RECOMMENDED MINIMUM OF / RANDOM SAMPLE UNITS TO BE SURVEYED.

STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 11.1%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTF	RESS-TYPE	SEVERITY	QUANTIT	Ϋ́	DENSITY %	DEDUCT VALUE
43 BI	JOCK CR	LOW	10259.00	(SF)	15.78	19.69
43 BI	JOCK CR	MEDIUM	47970.00	(SF)	73.80	47.25
43 BI	JOCK CR	HIGH	1299.00	(SF)	2.00	24.77
50 PA	TCHING	LOW	301.00	(SF)	0.46	2.39
50 PA	TCHING	MEDIUM	5101.00	(SF)	7.85	24.46
52 WE	CATH/RAVEL	LOW	520.00	(SF)	0.80	2.29

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - Taxiway L Section Length - 115.00 LF

Branch Number - T22B Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 5750.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 46 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 1

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 1
RECOMMENDED MINIMUM OF 1 2000 Ω

RECOMMENDED MINIMUM OF 1 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 10.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE

43 BLOCK CR LOW 5750.00 (SF) 100.00 47 JT REFLECT CR MEDIUM 600.00 (LF) 13.74 43 BLOCK CR LOW 35.60

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.

RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - Taxiway L Section Length - 425.00 LF

Branch Number - T23B Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 21250.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 27 RATING = POOR

TOTAL NUMBER OF SAMPLE UNITS = 4 NUMBER OF RANDOM SAMPLE UNITS SURVEYED

RECOMMENDED MINIMUM OF 4 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 0.7%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTII	'Y	DENSITY %	DEDUCT VALUE
43 BLOCK CR	MEDIUM	21250.00	(SF)	100.00	52.99
47 JT REFLECT	CR MEDIUM	2398.00	(LF)	11.99	39.93
50 PATCHING	LOW	36.00	(SF)	0.18	2.01
52 WEATH/RAVEL	LOW	21250.00	(SF)	100.00	26.34

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - Taxiway L Section Length - 562.00 LF

Branch Number - T24B Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 28100.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 36 RATING = POOR

TOTAL NUMBER OF SAMPLE UNITS = 5

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF T

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 12.2%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE

43 BLOCK CR MEDIUM 28100.00 (SF) 100.00 47 JT REFLECT CR MEDIUM 3000.00 (LF) 12.00 52.99 39.93

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson

Branch Name - Taxiway M Section Length - 268.00 LF

Branch Number - T25B Section Width - 75.00 LF

Section Number - 1 Family - DEFAULT Section Area - 20100.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 40 RATING = POOR

TOTAL NUMBER OF SAMPLE UNITS = 3

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 2 PRICE

RECOMMENDED MINIMUM OF 3 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 6.1%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	11987.00 (SF)	53.28	29.07
47 JT REFLECT CR	LOW	1087.00 (LF)	4.83	10.48
47 JT REFLECT CR	MEDIUM	1349.00 (LF)	6.00	30.29
47 JT REFLECT CR	HIGH	862.00 (LF)	3.83	35.38

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson
Branch Name - Rotary Wing Taxiway Section Length - 350.00 LF
Branch Number - T26B Section Width - 40.00 LF
Section Number - 1 Family - DEFAULT Section Area - 14000.00 SF

Inspection Date: JAU/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 64 RATING = GOOD

TOTAL NUMBER OF SAMPLE UNITS = 4 NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 4 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 4 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 3.7%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE
43 BLOCK CR LOW 14000.00 (SF) 100.00 35.59

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

```
Network ID - Lawson

Branch Name - Black Ramp Slab Length - 25.00 LF

Slab Width - 25.00 LF
Section Number - 1 Family - DEFAULT Number of Slabs -
                                                                         482
Inspection Date: JUN/26/2001
 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
  PCI OF SECTION = 86
                                                         RATING = EXCELLENT
  TOTAL NUMBER OF SAMPLE UNITS = 21
  NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 15
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
  RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.
  STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 2.0%
          *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
  DISTRESS-TYPE
                     SEVERITY
                                     QUANTITY
                                                       DENSITY % DEDUCT VALUE
  65 JT SEAL DAM HIGH
                                    482 (SLABS)
                                                       100.00
                                                                         12.00
  66 SMALL PATCH LOW
67 LARGE PATCH LOW
                                    16 (SLABS)
                                                       3.33
1.00
                                                                        0.44
0.75
                                    10 (SLABS)
2 (SLABS)
2 (SLABS)
2 (SLABS)
6 (SLABS)
2 (SLABS)
3 (SLABS)
                                                       1.00 0.50
1.00 0.60
1.33 1.12
1.00 1.00
1.00 0.30
                     LOW
  70 SCALING LOW
73 SHRINKAGE CR N/A
74 JOINT SPALL LOW
74 JOINT SPALL MEDIUM
75 CRALL LOW
  70 SCALING
  75 CORNER SPALL LOW
       *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
                                                  .00 PERCENT DEDUCT VALUES.
                       RELATED DISTRESSES =
  CLIMATE/DURABILITY RELATED DISTRESSES = 72.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 28.00 PERCENT DEDUCT VALUES.
```

```
Network ID - LAWSON

Branch Name - Black Ramp Slab Length - 25.00 LF

Slab Width - 25.00 LF

Slab Width - 25.00 LF
Section Number - 1 Family - DEFAULT Number of Slabs -
  Inspection Date: JUN/26/2001
  Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
  PCI OF SECTION = 84
                                                             RATING = VERY GOOD
  TOTAL NUMBER OF SAMPLE UNITS = 12
                                                           9
0
  NUMBER OF RANDOM SAMPLE UNITS SURVEYED
  NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED =
  RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.
  STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 4.0%
           *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
                                      QUANTITY
  DISTRESS-TYPE SEVERITY
                                                         DENSITY % DEDUCT VALUE
  65 JT SEAL DAM HIGH 1909 (SLABS)
66 SMALL PATCH LOW 14 (SLABS)
74 JOINT SPALL LOW 139 (SLABS)
75 CORNER SPALL LOW 56 (SLABS)
75 CORNER SPALL MEDIUM 56 (SLABS)
                                                           85.00
1.00
6.21
2.48
2.48
                                                                             12.00
                                                                              0.15
2.45
                                                                              0.98
1.67
       *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
                                                    .00 PERCENT DEDUCT VALUES.
                        RELATED DISTRESSES =
  CLIMATE/DURABILITY RELATED DISTRESSES = 70.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
```

Network ID - Lawson
Branch Name - Brown Ramp Branch Name - Brown Ramp Section Length - 1520.00 LF
Branch Number - A3B Section Width - 300.00 LF
Section Number - 1 Family - DEFAULT Section Area - 183347.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 43 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 39

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMIM OF 11 PROFESSIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 11 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 9.9%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
41 ALLIGATOR CR 41 ALLIGATOR CR	LOW MEDIUM	500.00 (S 3896.00 (S	,	10.20 37.03
43 BLOCK CR	LOW	31303.00 (8		20.19
43 BLOCK CR	MEDIUM	143093.00 (S	,	48.25
43 BLOCK CR	HIGH	4163.00 (S	SF) 2.27	25.87

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

```
Network ID
                            - Lawson
Network ID - Lawson
Branch Name - Brown Ramp
                                                                               Section Length - 1630.00 LF
Section Width - 380.00 LF
Branch Number - A4B
Section Number - 1 Family - DEFAULT Section Area - 436985.00 SF
Inspection Date: JUN/26/2001
   Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
   PCI OF SECTION = 37
                                                                                              RATING = POOR
   TOTAL NUMBER OF SAMPLE UNITS = 80
                                                                                          13
   NUMBER OF RANDOM SAMPLE UNITS SURVEYED
   NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED =
                                                                                            0
   RECOMMENDED MINIMUM OF 14 RANDOM SAMPLE UNITS TO BE SURVEYED.
    STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 10.6%
                *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
   DISTRESS-TYPE SEVERITY
                                                            QUANTITY DENSITY % DEDUCT VALUE

      43 BLOCK CR
      LOW
      230312.00 (SF)
      52.70

      43 BLOCK CR
      MEDIUM
      51563.00 (SF)
      11.80

      43 BLOCK CR
      HIGH
      10313.00 (SF)
      2.36

      45 DEPRESSION
      MEDIUM
      206.00 (SF)
      0.10

      47 JT REFLECT CR
      LOW
      7255.00 (LF)
      1.66

      47 JT REFLECT CR
      MEDIUM
      25204.00 (LF)
      5.77

      47 JT REFLECT CR
      HIGH
      11897.00 (LF)
      2.72

      48 L & T CR
      LOW
      1513.00 (LF)
      0.35

      48 L & T CR
      MEDIUM
      1788.00 (LF)
      0.41

      48 L & T CR
      HIGH
      2751.00 (LF)
      0.63

      53 RUTTING
      MEDIUM
      550.00 (SF)
      0.13

      56 SWELL
      LOW
      172.00 (SF)
      0.10

      56 SWELL
      HIGH
      447.00 (SF)
      0.10

                                                                                                                  28.97
                                                                                                                       24.74
                                                                                                                    26.21
                                                                                                                     5.20
4.77
                                                                                                                  29.75
                                                                                                                   29.40
                                                                                                                    3.75
                                                                                                                       7.57
                                                                                                                   15.92
13.75
                                                                                                                        1.00
                                                                                                                      28.06
           *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
   LOAD RELATED DISTRESSES = 6.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 78.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 16.00 PERCENT DEDUCT VALUES.
```

Network ID - LAWSON
Branch Name - Brown Ramp Pads Slab Length - 14.00 LF
Slab Width - 6.67 LF Section Number - 1 Family - DEFAULT Number of Slabs -Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 82 RATING = VERY GOOD TOTAL NUMBER OF SAMPLE UNITS = 9 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINITURE OF 5 RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 6.2% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE

 63 LINEAR CR
 LOW
 8 (SLABS)
 4.96
 4.74

 66 SMALL PATCH
 LOW
 3 (SLABS)
 2.13
 0.44

 67 LARGE PATCH
 LOW
 41 (SLABS)
 25.53
 12.19

 73 SHRINKAGE CR
 N/A
 51 (SLABS)
 31.91
 4.51

 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = 22.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 0.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 78.00 PERCENT DEDUCT VALUES.

Network ID - Lawson
Branch Name - Brown Ramp Section Length - 190.00 LF
Branch Number - A6B Section Width - 170.00 LF
Section Number - 1 Family - DEFAULT Section Area - 25446.00 SF

Inspection Date: JUN/26/2001
Riding Quality: Safety: Drainage Cond.:
Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 47 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 2

TOTAL NUMBER OF SAMPLE UNITS = 2

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 2

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 2 RANDOM SAMPLE UNITS TO BE SURVEYED.

STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 10.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE
43 BLOCK CR MEDIUM 25446.00 (SF) 100.00 53.00

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

Network ID - Lawson
Branch Name - Brown Ramp Branch Name - Brown Ramp Section Length - 65.00 LF
Branch Number - A7B Section Width - 130.00 LF
Section Number - 1 Family - DEFAULT Section Area - 17760.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 41 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 3

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 2 PRICE

RECOMMENDED MINIMUM OF 3 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 1.2%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	2650.00 (SF)	14.92	19.34
43 BLOCK CR	MEDIUM	15106.00 (SF)	85.06	49.85
52 WEATH/RAVEL	T.OW	14831.00 (SF)	83.51	24.67

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. OTHER

Network ID - Lawson

Branch Name - Yellow Ramp Section Length - 575.00 LF

Branch Number - A8B Section Width - 140.00 LF

Section Number - 1 Family - DEFAULT Section Area - 80500.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 61 RATING = GOOD

TOTAL NUMBER OF SAMPLE UNITS = 22 RECOMMENDED MINIMUM OF 7 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 8.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

43 BLOCK CR LOW 4602.00 (SF) 5.72 14.19 47 JT REFLECT CR LOW 4977.00 (LF) 6.18 12.12 47 JT REFLECT CR MEDIUM 5927.00 (LF) 7.36 13.17 47 JT REFLECT CR HIGH 43.00 (LF) 0.10 1.20 48 L & T CR LOW 115.00 (LF) 0.14 2.67	DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
52 WEATH/RAVEL LOW 9449.00 (SF) 11.74 10.64	47 JT REFLECT CR	LOW	4977.00 (LF)	6.18	12.12
	47 JT REFLECT CR	MEDIUM	5927.00 (LF)	7.36	13.17
	47 JT REFLECT CR	HIGH	43.00 (LF)	0.10	1.20
	48 L & T CR	LOW	115.00 (LF)	0.14	2.67

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. OTHER

Network ID - Lawson

Branch Name - Yellow Ramp Section Length - 575.00 LF

Branch Number - A9B Section Width - 50.00 LF

Section Number - 1 Family - DEFAULT Section Area - 28750.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 57 RATING = GOOD

TOTAL NUMBER OF SAMPLE UNITS = 6

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 5

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.

STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 4.4%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	6663.00 (SF)	23.18	22.27
47 JT REFLECT	CR LOW	2499.00 (LF)	8.70	14.53
47 JT REFLECT	CR MEDIUM	1867.00 (LF)	6.50	31.41
48 L & T CR	LOW	71.24 (LF)	0.25	3.39
50 PATCHING	LOW	82.71 (SF)	0.29	2.10

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

```
Network ID - Lawson

Branch Name - Yellow Ramp Section Length - 275.00 LF

Branch Number - A10B Section Width - 140.00 LF

Section Number - 1 Family - DEFAULT Section Area - 38500.00 SF
   Inspection Date: JUN/26/2001
   Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
   PCI OF SECTION = 46
                                                                                                   RATING = FAIR
   TOTAL NUMBER OF SAMPLE UNITS = 11
   NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 7

RECOMMENDED MINIMUM OF TOTAL SURVEYED = 0
   RECOMMENDED MINIMUM OF 7 RANDOM SAMPLE UNITS TO BE SURVEYED.
    STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 11.1%
                 *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

        DISTRESS-TYPE
        SEVERITY
        QUANTITY
        DENSITY %
        DEDUCT VALUE

        41 ALLIGATOR CR
        LOW
        377.00 (SF)
        0.98
        20.30

        41 ALLIGATOR CR
        MEDIUM
        1195.00 (SF)
        3.10
        41.39

        43 BLOCK CR
        LOW
        10612.00 (SF)
        27.56
        23.54

        47 JT REFLECT CR
        LOW
        999.00 (LF)
        2.59
        6.88

                                                           10612.00 (SF) 27.56
999.00 (LF) 2.59
2485.00 (LF) 6.46
157.00 (LF) 0.41
705.00 (SF) 1.83
                                                                                                                                6.88
    47 JT REFLECT CR MEDIUM
                                                                                                                              31.32
   47 JT REFLECT CR HIGH
52 WEATH/RAVEL LOW
                                                                                                                              6.98
3.78
           *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
   LOAD RELATED DISTRESSES = 46.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 54.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
```

Network ID - Lawson
Branch Name - Yellow Ramp Section Length - 1400.00 LF
Branch Number - A11B Section Width - 190.00 LF
Section Number - 1 Family - DEFAULT Section Area - 71708.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 60 RATING = GOOD

TOTAL NUMBER OF SAMPLE UNITS = 13

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 8

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 6 RANDOM SAMPLE UNITS TO BE SURVEYED.

STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 9.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
47 JT REFLECT CR	LOW	4389.00 (LF)	6.12	12.05
47 JT REFLECT CR	MEDIUM	6270.00 (LF)	8.75	35.57
47 JT REFLECT CR	HIGH	143.00 (LF)	0.20	3.40
48 L & T CR	LOW	788.00 (LF)	1.10	5.16
48 L & T CR	MEDIUM	36.00 (LF)	0.10	4.00

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - Yellow Ramp Section Length - 1230.00 LF

Branch Number - A12B Section Width - 300.00 LF

Section Number - 1 Family - DEFAULT Section Area - 276138.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 55 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 65

NUMBER OF RANDOM SAMPLE UNITS SURVEYED = 13
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMIM OF 0 DESCRIPTION

RECOMMENDED MINIMUM OF 8 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 7.9%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY		QUANTITY		DENSITY %	DEDUCT VALUE	
43 BLOCK CR	MEDIUM	2604.00	(SF)	0.94	11.76	
47 JT REFLECT CR	LOW	14875.00	(LF)	5.39	11.19	
47 JT REFLECT CR	MEDIUM	19592.00	(LF)	7.10	32.65	
47 JT REFLECT CR	HIGH	3986.00	(LF)	1.44	19.70	
48 L & T CR	LOW	4689.00	(LF)	1.70	6.62	
48 L & T CR	MEDIUM	521.00	(LF)	0.19	4.97	
52 WEATH/RAVEL	LOW	14845.00	(SF)	5.38	7.08	

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

```
Network ID - Lawson
Branch Name - Apron 1
                                                  Slab Length - 15.00 LF
Slab Width - 12.50 LF
Branch Number - A14B
Section Number - 1 Family - DEFAULT Number of Slabs -
                                                                                                                            878
   Inspection Date: JUN/26/2001
   Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
   PCI OF SECTION = 85
                                                                                                 RATING = VERY GOOD
   TOTAL NUMBER OF SAMPLE UNITS = 39
                                                                                             19
   NUMBER OF RANDOM SAMPLE UNITS SURVEYED
   NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED =
                                                                                               0
   RECOMMENDED MINIMUM OF 6 RANDOM SAMPLE UNITS TO BE SURVEYED.
   STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 6.8%
                 *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
                                                             QUANTITY
   DISTRESS-TYPE SEVERITY
                                                                                          DENSITY % DEDUCT VALUE

        62 CORNER BREAK
        LOW
        2 (SLABS)
        1.00

        62 CORNER BREAK
        MEDIUM
        2 (SLABS)
        1.00

        65 JT SEAL DAM
        LOW
        34 (SLABS)
        3.85

        65 JT SEAL DAM
        HIGH
        844 (SLABS)
        96.15

        66 SMALL PATCH
        LOW
        5 (SLABS)
        1.00

        67 LARGE PATCH
        LOW
        27 (SLABS)
        3.08

        67 LARGE PATCH
        MEDIUM
        2 (SLABS)
        1.00

        70 SCALING
        LOW
        5 (SLABS)
        1.00

        71 FAULTING
        LOW
        2 (SLABS)
        1.00

        71 FAULTING
        HIGH
        2 (SLABS)
        1.00

        74 JOINT SPALL
        LOW
        18 (SLABS)
        2.05

        75 CORNER SPALL
        LOW
        9 (SLABS)
        1.00

                                                                                                                         0.70
                                                                                                                   2.00
12.00
0.15
2.15
2.50
                                                                                                                            1.50
                                                                                                                         0.50
                                                                                                                           1.00
   71 FAULTING HIGH
74 JOINT SPALL LOW
75 CORNER SPALL LOW
                                                                                                                           3.50
1.52
                                                                9 (SLABS)
                                                                                               1.00
                                                                                                                           0.33
           *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
                                       RELATED DISTRESSES = 8.00 PERCENT DEDUCT VALUES.
   CLIMATE/DURABILITY RELATED DISTRESSES = 50.00 PERCENT DEDUCT VALUES.

OTHER RELATED DISTRESSES = 42.00 PERCENT DEDUCT VALUES.
```

```
Network ID - Lawson

Branch Name - Green Ramp Section Length - 1500.00 LF

Branch Number - A15B Section Width - 480.00 LF

Section Number - 1 Family - DEFAULT Section Area - 390273.00 SF
Inspection Date: JUN/26/2001
   Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
   PCI OF SECTION = 36
                                                                                     RATING = POOR
   TOTAL NUMBER OF SAMPLE UNITS = 64
                                                                                 13
   NUMBER OF RANDOM SAMPLE UNITS SURVEYED
   NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED =
                                                                                  0
   RECOMMENDED MINIMUM OF 29 RANDOM SAMPLE UNITS TO BE SURVEYED.
   STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 18.5%
              *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
   DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VAI
41 ALLIGATOR CR LOW 17994.00 (SF) 4.61 35.36
41 ALLIGATOR CR MEDIUM 11996.00 (SF) 3.07 41.27
5758.00 (SF) 1.48 40.67
                                                                                                  DEDUCT VALUE
   41 ALLIGATOR CR MEDIUM 11996.00 (SF) 3.07
41 ALLIGATOR CR HIGH 5758.00 (SF) 1.48
43 BLOCK CR LOW 221832.00 (SF) 56.84
43 BLOCK CR MEDIUM 102474.00 (SF) 26.26
43 BLOCK CR HIGH 24016.00 (SF) 6.15
45 DEPRESSION LOW 32736.00 (SF) 8.39
45 DEPRESSION MEDIUM 4318.00 (SF) 1.11
45 DEPRESSION HIGH 2429.00 (SF) 0.62
50 PATCHING LOW 1296.00 (SF) 0.33
52 WEATH/RAVEL LOW 8997.00 (SF) 2.31
53 RUTTING HIGH 143.00 (SF) 0.10
                                                                                                           29.68
                                                                                                           32.42
35.79
                                                                                                          24.87
                                                                                                            16.45
                                                                                                           22.46
                                                                                                           2.16
                                                                                                              4.34
                                                                                                           19.90
          *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
   LOAD RELATED DISTRESSES = 45.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 34.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 21.00 PERCENT DEDUCT VALUES.
```

Network ID - Lawson

Branch Name - Green Ramp Section Length - 1025.00 LF

Branch Number - A16B Section Width - 150.00 LF

Section Number - 1 Family - DEFAULT Section Area - 153750.00 SF Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 21 RATING = VERY POOR TOTAL NUMBER OF SAMPLE UNITS = 10 6 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 5.7% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE

 43 BLOCK CR
 LOW
 11417.00 (SF)
 7.43

 43 BLOCK CR
 MEDIUM
 13311.00 (SF)
 8.66

 43 BLOCK CR
 HIGH
 106386.00 (SF)
 69.19

 45 DEPRESSION
 LOW
 1792.00 (SF)
 1.17

 50 PATCHING
 LOW
 11058.00 (SF)
 7.19

 50 PATCHING
 MEDIUM
 12287.00 (SF)
 7.99

 15.45 22.40 71.24 7.55 12.19 24.68 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 95.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 5.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - Green Ramp Section Length - 710.00 LF

Branch Number - A17B Section Width - 1220.00 LF

Section Number - 1 Family - DEFAULT Section Area - 479010.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 55 RATING = FAIR

TOTAL NUMBER OF SAMPLE UNITS = 90

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 14
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF A DIVISION NUMBER OF RANDOM SAMPLE UNITS SURVEYED

RECOMMENDED MINIMUM OF 8 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 7.6%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	315131.00 (SF)	65.79	31.11
43 BLOCK CR	MEDIUM	153122.00 (SF)	31.97	34.75
43 BLOCK CR	HIGH	3418.00 (SF)	0.71	17.25
45 DEPRESSION	LOW	1094.00 (SF)	0.23	1.01

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 99.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 1.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - Green Ramp Slab Length - 15.00 LF

Branch Number - A18B Slab Width - 12.50 LF

Number of Slabs - 200 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 33 RATING = POOR TOTAL NUMBER OF SAMPLE UNITS = 12 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = Ω RECOMMENDED MINIMUM OF 10 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 24.3% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE | DISTRESS-TIPE | SEVERITI | SEVE *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = 91.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 8.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 1.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - Red Ramp Hoverlane Section Length - 1365.00 LF

Branch Number - A19B Section Width - 100.00 LF

Section Number - 1 Family - DEFAULT Section Area - 136500.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 64 RATING = GOOD

TOTAL NUMBER OF SAMPLE UNITS = 13 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 7

RECOMMENDED MINIMUM OF F DAYLOW RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 0.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE 43 BLOCK CR LOW 136500.00 (SF) 100.00 35.58

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. OTHER

Network ID - Lawson

Branch Name - Red Ramp Pads Slab Length - 10.00 LF

10.00 LF

Slab Width - 10.00 LF

10.00 LF Section Number - 1 Family - DEFAULT Number of Slabs -Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 88 RATING = EXCELLENT TOTAL NUMBER OF SAMPLE UNITS = 12 LI JI MANDOM SAMPLE UNITS SURVEYED = 10
NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0
RECOMMENDED MINIMUM OF 5 --RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 4.9 *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE 63 LINEAR CR LOW 7 (SLABS) 1.88
65 JT SEAL DAM LOW 345 (SLABS) 90.00
65 JT SEAL DAM MEDIUM 38 (SLABS) 10.00
73 SHRINKAGE CR N/A 2 (SLABS) 1.00
74 JOINT SPALL LOW 84 (SLABS) 21.88
74 JOINT SPALL MEDIUM 10 (SLABS) 2.50
75 CORNER SPALL LOW 2 (SLABS) 1.00 2.01 2.00 7.00 0.60 6.39 2.50 2.93 75 CORNER SPALL LOW 2 (SLABS) 0.30 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = 9.00 PERCENT DEDUCT VALUES CLIMATE/DURABILITY RELATED DISTRESSES = 42.00 PERCENT DEDUCT VALUES RELATED DISTRESSES = 49.00 PERCENT DEDUCT VALUES

Network ID - Lawson

Branch Name - Red Ramp Section Length - 460.00 LF

Branch Number - A21B Section Width - 425.00 LF

Section Number - 1 Family - DEFAULT Section Area - 117,688.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 54 RATING = Fair

TOTAL NUMBER OF SAMPLE UNITS = 25

L. J. MANDOM SAMPLE UNITS SURVEYED = 10

NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 0 DIVINI 0

RECOMMENDED MINIMUM OF 8 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 9.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
43 BLOCK CR	LOW	72890.00 (SF)	61.93	30.51
43 BLOCK CR	MEDIUM	141680.00 (SF)	37.96	36.96
43 BLOCK CR	LOW	141680.00 (SF)	0.68	4.62
43 BLOCK CR	LOW	141680.00 (SF)	0.10	2.00
43 BLOCK CR	LOW	141680.00 (SF)	0.10	2.00
43 BLOCK CR	LOW	141680.00 (SF)	0.30	1.40

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 91.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 9.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - White Ramp Hoverlane Section Length - 1540.00 LF

Branch Number - A22B Section Width - 92.00 LF

Section Number - 1 Family - DEFAULT Section Area - 141680.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 64 RATING = GOOD

TOTAL NUMBER OF SAMPLE UNITS = 15 8 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 0.0%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE 43 BLOCK CR LOW 141680.00 (SF) 100.00 35.58

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. OTHER

Network ID - Lawson

Branch Name - White Ramp Pads Slab Length - 15.00 LF

Branch Number - A23B Slab Width - 10.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 60 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 90 RATING = EXCELLENT TOTAL NUMBER OF SAMPLE UNITS = 15 14 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 3.9% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE 65 JT SEAL DAM LOW 60 (SLABS) 100.00
74 JOINT SPALL LOW 21 (SLABS) 35.71
74 JOINT SPALL MEDIUM 0 (SLABS) 0.00
75 JOINT SPALL HIGH 0 (SLABS) 0.00
75 CORNER SPALL LOW 0 (SLABS) 0.00
75 CORNER SPALL MEDIUM 0 (SLABS) 0.00
75 CORNER SPALL HIGH 0 (SLABS) 0.00
75 CORNER SPALL HIGH 0 (SLABS) 0.00 2.00 8.94 0.30 0.30 0.30 0.30 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 18.00 PERCENT DEDUCT VALUES.

OTHER RELATED DISTRESSES = 82.00 PERCENT DEDUCT VALUES.

Network ID - Lawson
Branch Name - White Ramp Hangar Apron Section Length - 600.00 LF
Branch Number - A24B Section Width - 430.00 LF
Section Number - 1 Family - DEFAULT Section Area - 182268.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 57 RATING = GOOD

TOTAL NUMBER OF SAMPLE UNITS = 17

17 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0

RECOMMENDED MINIMUM OF 6 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 8.1%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE

43 BLOCK CR LOW 112459.00 (SF) 61.70 30.47 43 BLOCK CR MEDIUM 69617.00 (SF) 38.20 37.04

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

.00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES. OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. Network ID - Lawson

Branch Name - White Ramp Hangar Apr Slab Length - 15.00 LF

Branch Number - A25B Slab Width - 12.50 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 282 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 91 RATING = EXCELLENT TOTAL NUMBER OF SAMPLE UNITS = 11 10 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 3.5% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE LOW 65 (SLABS)

JT SEAL DAM MEDIUM 81 (SLABS)

JT SEAL DAM LOW 135 (SLABS)

LARGE PATCH LOW 1 (SLABS)

LOW 1 (SLABS)

LOW 1 (SLABS) 23.00 29.00 48.00 2.00 12.00 1.00 0.75 1.00 0.60 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** .00 PERCENT DEDUCT VALUES. RELATED DISTRESSES = CLIMATE/DURABILITY RELATED DISTRESSES = 94.00 PERCENT DEDUCT VALUES.

OTHER RELATED DISTRESSES = 6.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - Blue Ramp Hoverlane Section Length - 1610.00 LF

Branch Number - A26B Section Width - 100.00 LF

Section Number - 1 Family - DEFAULT Section Area - 161000.00 SF Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 64 RATING = GOOD TOTAL NUMBER OF SAMPLE UNITS = 16 8 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 0.0% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE 43 BLOCK CR LOW 161000.00 (SF) 100.00 35.58 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE	SEVERITY	QUANTITY	DENSITY %	DEDUCT VALUE
63 LINEAR CR	LOW	9 (SLABS)	60.00	21.36
73 SHRINKAGE CR	N/A	1 (SLABS)	6.67	

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

LOAD RELATED DISTRESSES = 94.00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 0.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 6.00 PERCENT DEDUCT VALUES.

Network ID - Lawson

Branch Name - South Holding Apron Slab Length - 25.00 LF

Branch Number - A28B Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 195 Inspection Date: JUN/26/2001 Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.: PCI OF SECTION = 80 RATING = VERY GOOD TOTAL NUMBER OF SAMPLE UNITS = 9 NUMBER OF RANDOM SAMPLE UNITS SURVEYED NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 0 RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 6.4% *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION *** QUANTITY DISTRESS-TYPE SEVERITY DENSITY % DEDUCT VALUE CO OI SEAL DAM LOW 43 (SLABS)
65 JT SEAL DAM HIGH 150 (SLABS)
70 SCALING LOW 28 (SLABS)
74 JOINT SPALL LOW 76.92 14.29 5.41 3 (SLABS) 4 (SLABS) 1 (SLABS) 1 (SLABS) 74 JOINT SPALL LOW HIGH 1.65 2.20 1.35 7.09 75 JOINT SPALL 75 CORNER SPALL MEDIUM 75 CORNER SPALL HIGH 1.00 0.80 1.00 1.20 *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM *** LOAD RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.
CLIMATE/DURABILITY RELATED DISTRESSES = 47.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = 53.00 PERCENT DEDUCT VALUES.

```
Network ID - Lawson

Branch Name - North Holding Apron Slab Length - 25.00 LF

Branch Number - A29B Slab Width - 25.00 LF

Section Number - 1 Family - DEFAULT Number of Slabs - 195
  Inspection Date: JUN/26/2001
  Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:
  PCI OF SECTION = 92
                                                                           RATING = EXCELLENT
   TOTAL NUMBER OF SAMPLE UNITS = 10
  NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 7

RECOMMENDED MINIMUM OF T
   RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED.
   STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 3.2%
             *** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***
                                                QUANTITY
   DISTRESS-TYPE SEVERITY
                                                                      DENSITY % DEDUCT VALUE
  02 CURNER BREAK LOW 3 (SLABS)
65 JT SEAL DAM MEDIUM 167 (SLABS)
73 SHRINKAGE CR N/A 1 (SLABS)
74 JOINT SPALL LOW 1 (SLABS)
75 CORNER SPALL LOW 1 (SLABS)
                                                                         1.43 1.49
85.71 7.00
1.00 0.60
1.00 0.60
1.00 0.30
        *** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***
   LOAD RELATED DISTRESSES = 15.00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 70.00 PERCENT DEDUCT VALUES. OTHER RELATED DISTRESSES = 15.00 PERCENT DEDUCT VALUES.
```

Network ID - Lawson Branch Name - Apron 2 Branch Number - A30B Network ID - Lawson

Branch Name - Apron 2 Section Length - 400.00 LF

Branch Number - A30B Section Width - 200.00 LF

Section Number - 1 Family - DEFAULT Section Area - 78500.00 SF

Inspection Date: JUN/26/2001

Riding Quality: Safety: Drainage Cond.: Shoulder Cond.: Overall Cond.: F.O.D.:

PCI OF SECTION = 64 RATING = GOOD

TOTAL NUMBER OF SAMPLE UNITS = 15 NUMBER OF ADDITIONAL SAMPLE UNITS SURVEYED = 7

RECOMMENDED MINIMUM OF F DAYLOW

RECOMMENDED MINIMUM OF 5 RANDOM SAMPLE UNITS TO BE SURVEYED. STANDARD DEVIATION OF PCI BETWEEN RANDOM UNITS SURVEYED = 0.5%

*** EXTRAPOLATED DISTRESS QUANTITIES FOR SECTION ***

DISTRESS-TYPE SEVERITY QUANTITY DENSITY % DEDUCT VALUE

43 BLOCK CR MEDIUM 75281.00 (SF) 95.9 50 PATCHING LOW 3137.00 (SF) 4.0 52.17 8.65

*** PERCENT OF DEDUCT VALUES BASED ON DISTRESS MECHANISM ***

RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES. CLIMATE/DURABILITY RELATED DISTRESSES = 100.00 PERCENT DEDUCT VALUES.
OTHER RELATED DISTRESSES = .00 PERCENT DEDUCT VALUES.

REPORT DOCUMENTATION PAGE

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13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

An airfield pavement evaluation was performed in June 2001 at Lawson Army Airfield, Fort Benning, Georgia, to develop information pertaining to the structural adequacy of the airfield pavements for continued use under its current mission and the upgrading of the pavements for mission changes. The pavement surface condition was evaluated using the Pavement condition Index (PCI) survey procedure, and a nondestructive evaluation procedure was used to determine the load-carrying capability of the pavements and overlay requirements for continued use of the pavements under current missions. Results of the evaluation are presented including: (a) a tabulation of the existing pavement features, (b) the results of the nondestructive tests performed using a heavy weight deflectometer, (c) the PCI and rating of the surface of each pavement feature, (d) a structural evaluation and overlay requirements for 61,000 passes of the C-17 aircraft on Portland cement concrete, (e) the pavement classification number for each pavement facility, and (f) maintenance and repair recommendations based on the structural evaluation and condition survey.

Aircraft classification number Nondestructive testing

Allowable gross aircraft load Pavement classification number Lawson Army Airfield Payement condition index

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